FINANCIAL STATISTICS*					
(millions of dollars)	1989	1988	1987	1986	1985
Total assets	33,952	31,762	31,659	30,588	29,183
Long-term debt	21,957	20,576	21,198	20,349	20,123
Shareholder's equity	8,233	7,850	7,531	7,023	6,720
Capital expenditures	2,412	2,033	1,581	1,470	1,528
Revenue from sales of electricity	5,503	5,223	5,040	4,673	4,423
Net income	565	619	508	303	209
OPERATING STATISTICS					
Installed capacity** *(megawatts)*	25,126	24,590	24,533	24,475	23,510
Sales of electricity *(billions of kilowatthours)*	137.6	145.4	152.9	144.1	133.9
Total number of customer accounts *(thousands)*	3,086	3,032	2,947	2,862	2,784
NUMBER OF EMPLOYEES*					
Permanent	19,437	19,252	18,933	18,470	18,208
Temporary****	4,425	3,521	2,989	2,749	3,163

* These figures are taken from the consolidated financial statements, which contain the financial statements of Hydro-Québec and its subsidiaries.

** In addition to its own installed capacity, Hydro-Québec has access to most of the generation of the Churchill Falls power plant, which has a nominal capacity of 5,428 megawatts.

*** These figures exclude employees on loan to subsidiaries.

**** Annual average.

Gouvernement du Québec

Deputy Prime Minister and
Minister of Energy and Resources,
Responsible for Regional Development

Québec City, March 13, 1990

Mr. Jean-Pierre Saintonge
President of the National Assembly
Québec City

Dear Sir,

I have the honor of submitting to you the annual report of Hydro-Québec for the year ended December 31, 1989.

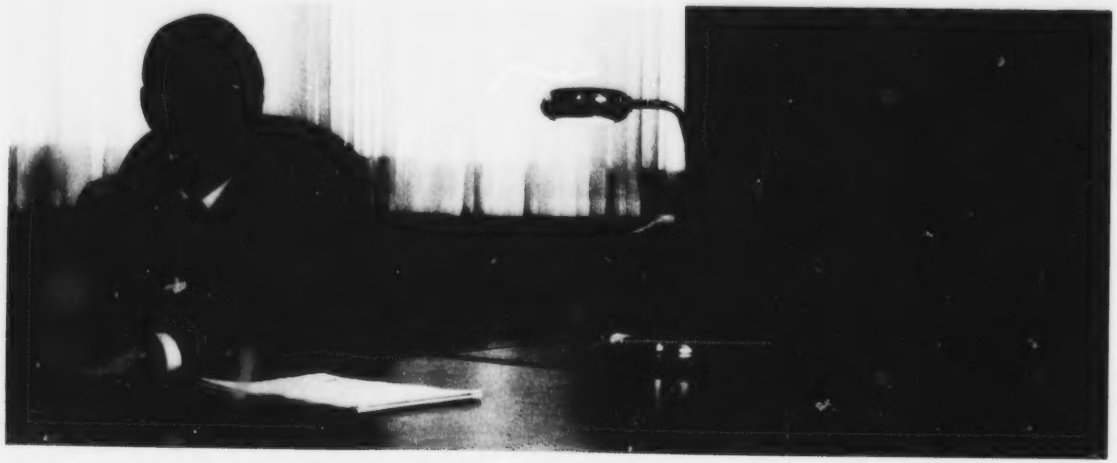
Yours respectfully,

- *Improving the quality of service was the central theme underlying everything Hydro-Québec did during 1989. By concentrating on the quality of its product, the utility aims to provide its customers with an electricity supply of the highest possible calibre.*
- *Following a number of power-system incidents in recent years, Hydro-Québec carried out an evaluation of its facilities in 1989. It concluded that some facilities had to be reinforced or fundamentally overhauled, and various operating practices reviewed. In 1989, the utility adopted a new maintenance policy and launched far-ranging programs which introduce corrective action and many additional work projects to improve the power system's overall performance. To date, the results have been encouraging.*
- *Nineteen eighty-nine was another year of very low precipitation. The below-average runoff since 1984 started to have a greater impact on energy reserves, at a time when demand was continuing to grow. To build up its reserves, Hydro-Québec has undertaken a number of measures that affect both supply and demand.*
- *Labor relations were at the forefront of management concerns in 1989. As three-quarters of Hydro-Québec's staff is unionized, renewal of the 11 collective agreements that expired at the end of 1988 was of concern throughout the year.*

- The customer is our business. *To provide the kind of service that the people of Québec have a right to expect, in 1989 Hydro-Québec launched a major program to enhance the quality of its customer service, designed to achieve more effective business practices and communications by 1991.*
- *To meet the new expectations of all its customers – residential, commercial, institutional and industrial – Hydro-Québec has set up a formal procedure to facilitate the filing, examination and processing of customer complaints.*
- Electricity – a product in demand. *A robust 1989 economy was responsible for a 0.5% rise in sales of firm electricity in Québec, building on five previous years of sustained growth. These firm-electricity sales grew markedly in two sectors: the residential and farm, and general and institutional. On external markets, firm-electricity sales remained relatively stable. Sales of surplus electricity, both within Québec and for export purposes, were virtually halted.*
- *There is every indication that the demand for electricity will continue its upward movement in the years to come. This trend is attributable to business from new households and favorable economic conditions. In addition, on the basis of new contracts signed in 1989 with industrial customers, Hydro-Québec can expect particular growth in electricity consumption in the aluminum and pulp and paper industries. The new contracts signed with the New York Power Authority will also contribute to the growth in demand.*
- *The marketing programs that Hydro-Québec has introduced over recent years illustrate interesting changes in the kinds of products offered on the energy market. For example, programs such as interruptible power for industry and Dual-Energy Plus for customers in the residential sector make it easier to manage demand during peak hours, while offering attractive rates. These programs allow the utility to get its customers involved in the efficient use of Québec's hydroelectric resources.*
- *With similar goals in mind, Hydro-Québec is embarking on an energy-efficiency initiative that will benefit the public at large. In addition to energy-saving programs introduced in recent decades, and newer programs involving electrotechnologies, all categories of customers will be encouraged to adopt a variety of conservation measures. The concept of sustainable development is founded on the premise that today's choices must optimize the use of resources without compromising the needs of future generations. This implies profound changes in our energy-consuming habits.*
- Strengthening the power system. *Many improvements were made to the power system in 1989. Delivering 137.6 billion kilowatthours via 122,000 kilometres of lines requires tremendous precision and reliability at all times. Optimal planning and operation of our facilities are accomplished through the expertise of thousands of Hydro-Québec employees, who have put considerable effort into turning the situation around.*

Richard Drouin, Chairman of the Board and Chief Executive Officer

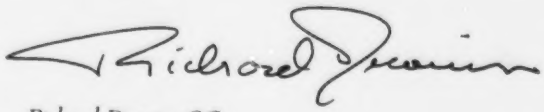
- *On top of regular maintenance activities for its facilities, Hydro-Québec has introduced specific programs that will be spread over a number of years: a Maintenance Enhancement Program for power-system installations; a Service Quality Enhancement Program for the distribution system; and a Reliability Enhancement Program for the transmission system. The major feature of this last program, which represents an investment of $1.3 billion, is the series-compensation equipment which will be introduced between now and 1994. In 1989, Hydro-Québec began to hire additional staff to perform all kinds of tasks, and more people will be brought on board in the next few years. The word is out: give customers a top-quality product.*
- *In view of the forecast for sustained growth in electricity demand in coming years, Hydro-Québec has decided to advance a number of its construction projects. As of early 1990, the additional capacity at Manic 5 PA generating station has boosted the utility's installed capacity by 1,064 megawatts. The completion of La Grande 2A power station will provide an extra 950 megawatts by the end of 1991, and another 950 megawatts in 1992. Construction work on the utility's 11th major transmission line is proceeding on schedule, with commissioning to start in 1990. As for Phase II of the La Grande complex, the three power stations under construction will add over 2,500 megawatts to Hydro-Québec's generating facilities. Some generating station projects have been speeded up: Brisay will be commissioned two years earlier than originally scheduled; Laforge 1 one year ahead of schedule; while La Grande 1 is still due to be commissioned in 1994-1995.*
- Closely interwoven activities. *Thanks to dialogue and cooperation among all parts of the utility, Hydro-Québec's activities have been unified behind a common goal: quality. In all construction projects and operating activities, the environment is considered at every stage – right from design through execution. Hydro-Québec has a new Technology Plan which provides a firm link between research and development and the utility's strategic activities, and has adopted tighter guidelines for suppliers of goods and services. All these initiatives have helped integrate the efforts of the many different players.*
- *This action has produced results: service continuity has improved, facility design criteria and maintenance standards are being reviewed, technological support is more closely aligned with the utility's priorities, and power-system changes are being based directly on the needs of customers.*
- Financial management. *During the year, Hydro-Québec experienced an appreciable rise in its operating expenses, mainly as the result of initiatives to offset the effects of low runoff. The speeding up of feasibility studies and the accelerated construction of new generation and transmission facilities largely explain the increase in capital expenditure. Interest also rose because expenses related to new commissionings in 1989 were transferred to operations; another factor was the fluctuation in interest rates during the year.*
- *A range of measures have enabled the utility to improve its risk management, especially with regard to Canadian dollar financing and fluctuating exchange rates.*



Claude Boivin, President and Chief Operating Officer

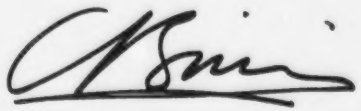
- *In 1989, Hydro-Québec was successful in respecting its main traditional financial criteria – capitalization of at least 25%, self-financing equal to or greater than 30%, and interest coverage higher than 1.00. At the same time, return on equity declined slightly in comparison to 1988.*
- People dedicated to quality of service. *Labor relations marked the management of human resources in 1989. Although four out of the 11 collective agreements up for renewal were signed, the working conditions of the rest of the utility's unionized staff remain to be determined. Hydro-Québec maintained its position that sound management and respect for the customer must remain the foundation of the negotiations. Conscious of its responsibility to provide strong leadership, management communicated clear, coherent messages, whose object was to unite employees behind the effort to provide customers with the best possible service. In this spirit, the utility emphasized technical training, pursued its* Action-cadres *program for managers, and laid the groundwork for a management program for specialists.*
- Reaching out to the world. *Hydro-Québec took special pride in its association with the 14th Congress of the World Energy Conference, held in Montréal. Under the honorary chairmanship of Hydro-Québec's Chairman of the Board and Chief Executive Officer, the congress provided a unique opportunity to make contact with 5,000 participants from all corners of the globe. The utility was able to promote its expertise, and an extremely profitable exchange of views took place on the energy issues of today and tomorrow.*

In closing, we wish to thank Denise Martin and Gérald Tremblay, who left the Board of Directors in 1989, for their contributions. We welcome new board members Mario Bertrand and Serge Ménard, and Michel Therrien and Jean-Guy René who were appointed, respectively, President and Chief Executive Officer of Hydro-Québec International and President and Chief Executive Officer of the Société d'énergie de la Baie James, *two of Hydro-Québec's wholly owned subsidiaries.*



Richard Drouin, QC

Chairman of the Board
and Chief Executive Officer



Claude Boivin

President and
Chief Operating Officer

Serving Québec means sharing responsibility for efficient energy management with everyone in Québec.

THE YEAR IN REVIEW

| ***Nineteen eighty-nine was a special turning point in Hydro-Québec's development. It was a year in which the utility shifted its priorities, realigning them with its basic mission of providing top-quality service to the people of Québec. Over coming years, the focus of Hydro-Québec's attention will be satisfying the needs of the customer.***

| ***Hydro-Québec's customers also include other electric utilities outside Québec, in Canada and the United States. Over the past 10 years, energy exports have brought in over $5 billion. Exchanges with neighboring systems are a two-way process and an extremely useful vehicle for assistance and cooperation between communities.***

Dual-register meter

QUÉBEC MARKETS

| *Firm-electricity sales rise.* Firm-electricity sales rose by 6.5% in 1989, continuing the sustained growth of 1988. The residential and farm sector led the way with 8.9%. The general and institutional sector followed closely, increasing 8.2%, while the industrial sector rose moderately, by 3.8%. The volume of surplus-electricity sales fell very sharply, by 96.5%. The volume of total electricity sales in Québec was 127.9 billion kilowatthours, 0.5% lower than the preceding year. Revenue from these sales was $5,195 million, up 9.3% over 1988.

| *Residential market.* The vitality of the residential market – the largest in terms of numbers of customers – is intimately linked to new construction, which, at 48,000 housing starts, was relatively active in 1989. Electric heating was as popular as ever with residential customers, holding over 90% of the new housing market.

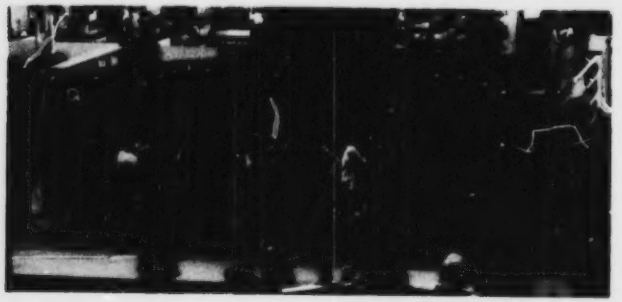
- The Dual-Energy Plus program, which was launched in 1987 to prevent erosion of the utility's existing residential dual-energy stock, has achieved most of its goals. Since 1987, over 73,000 customers have applied for Rate DT, a particularly advantageous peak/off-peak rate offered under the program. In order to preserve this business, Hydro-Québec decided to extend the program for a little over three years and to expand it to apartment buildings and dual-energy systems that use heat pumps. As part of its technological research, the utility also began testing two heating devices: a heat pump with nonelectric backup and an integrated dual-energy system. These devices, which were specially designed for dual-energy, should encourage growth of the utility's dual-energy stock and limit the rise in peak winter demand.
- *Commercial market.* Despite the cost disadvantage of electricity in comparison with other commercial energy sources, sales in this market grew by 7.6% in 1989. This growth was due to two factors: the popularity of electric heating owing to its high comfort factor, and the success of the dual-energy program. Electricity was chosen to heat over 60% of new commercial buildings, and in retail stores it reached almost 100% penetration.
- *Industrial market.* In 1989, Hydro-Québec signed four risk-and-profit-sharing contracts, three of which were in the aluminum industry, representing a total of 1,545 megawatts. The utility also made its interruptible-power program more flexible and set itself a 1,200-megawatt sales objective for 1995-1996. A number of new industrial customers were recruited, including three in the pulp and paper sector whose contracts alone represent 163 megawatts and 68% of the year's interruptible-power increase. The results of phase II of the Electrotechnology Implementation Assistance Program were positive: 39 agreements were signed, totaling 21 megawatts, and over $2 million was paid in grants. The program made a positive contribution to the development of Québec's petrochemical industry.

Lactantia limitée

- *Balancing supply and demand.* During 1989, Hydro-Québec used the flexibility built into its commercial, institutional and industrial dual-energy sales programs to balance power supply and demand. These programs can be used to absorb the energy surpluses that are available during periods of strong runoff. Or, during periods of low runoff, the utility can suspend delivery and ask customers to use their backup power source. As a result of the below-average runoff of the past six years, Hydro-Québec asked its commercial, institutional and industrial customers to use oil as their sole heat source for one year, starting December 1, 1989.
- *Energy efficiency* has always been important to Hydro-Québec. Over the past 25 years, it has taken many actions that have contributed to efficient energy use in Québec. The Cascade, Médaillon, Novelec, Énergain and EE programs produced especially good results in this respect, as did some of Hydro-Québec's successful marketing programs – the electro-technology, dual-energy and interruptible-power programs in particular. Early in 1990, Hydro-Québec will launch a very extensive energy-efficiency plan for all categories of customers.
- *Improving the quality of service.* Hydro-Québec's Customer Service Quality Enhancement Program, which was inaugurated in 1989, sets four specific objectives to be met starting in 1990: to improve the utility's telephone-call response rate; to lessen the negative effects of scheduled power interruptions by informing customers about them in advance; to increase the number of bills based on real meter readings; and to increase the penetration of the equalized payments plan. Over $60 million has been budgeted for this three-year program. The 40 permanent positions allocated for the overall program were filled in 1989, and hiring of temporary staff began.
- *Training for better customer service.* In a climate of increasing competition and rapidly evolving technology, it is essential to train people

to use available tools and methods. In 1989, the utility took a variety of actions aimed at developing the skills of its marketing staff, placing special emphasis on on-the-job training.

| *Listening to the customer.* The Customer Advisory Panel established in 1988, whose 12 members represent various customer categories, held a number of meetings throughout 1989 and made recommendations to the utility about certain marketing practices and energy-saving measures.



Hydro-Québec listens to its customers.

On-the-job training

| Hydro-Québec also implemented a formal complaints procedure for all its customers – residential, commercial, institutional and industrial – and appointed a vice president to be responsible for customer complaints and for seeing that the procedure achieves its goals. The Québec government created a Complaints Commissioner for residential customers, thus adding another level of recourse to the utility's complaints mechanism.

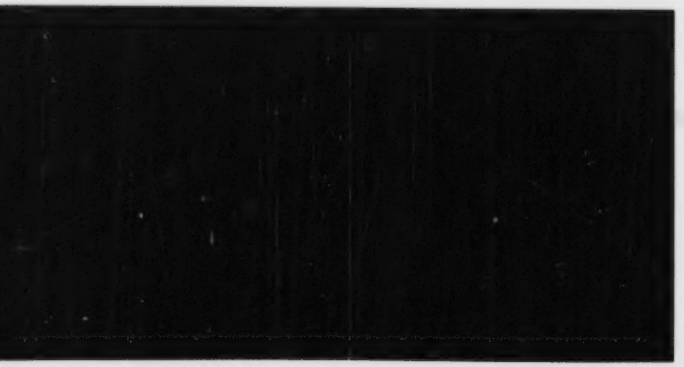
| *A reduction in stray voltages* in dairy and pig farms is the objective of the first phase of a program introduced in September to assist farm producers. The program, which is the subject of an agreement with the *ministère de l'Agriculture, des Pêcheries et de l'Alimentation,* was developed in cooperation with the *ministère de l'Énergie et des Ressources.*

In 1989, Hydro-Québec's decisions respecting exchanges with neighboring systems were guided by fluctuations in supply and demand. While short-term, non-firm energy transactions were limited by the low runoff and power-system operating constraints, the utility continued to negotiate long-term contracts.

Short-term transactions. A sixth year of below-average runoff made 1989 a year in which export sales fell markedly: Hydro-Québec made no hour-to-hour surplus-energy sales in the oil-replacement market except on rare occasions, for operating reasons. Some power sales were precluded by equipment unavailability, at Bersimis 2 and La Grande 4 power stations in particular. Magnetic storms also limited the power system's transmission capacity.

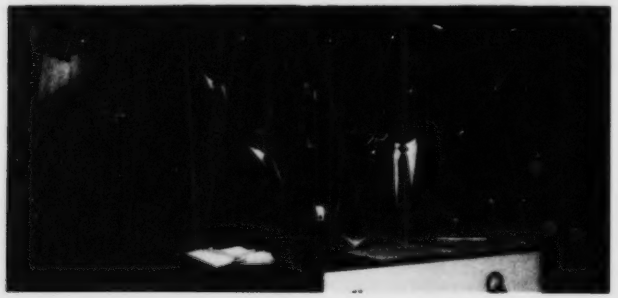
Deliveries under the utility's non-firm energy contracts with New York Power Authority (NYPA) and the New England Power Pool (NEPOOL) were suspended in 1989, as provided under the terms of the contracts in the event of insufficient energy supplies. Hydro-Québec bought off-peak energy with a view to retaining as much of the energy stored in its reservoirs as possible, and bought power to enable it to meet its winter peak.

Long-term sales. On April 26, 1989, Hydro-Québec and NYPA signed a firm power and energy contract for 1,000 megawatts and 131 billion kilowatthours. Hydro-Québec will deliver two 500-megawatt blocks to NYPA, the first from 1995 to 2015, and the second from 1996 to 2016. This is Hydro-Québec's largest-ever export contract, and should bring in close to $17 billion.



La Grande 2 spillway

Hydro-Québec also brought the negotiation of two seasonal-diversity power contracts with NYPA to a successful conclusion in 1989. This type of contract is based on the fact that peak demand on Hydro-Québec's power system occurs during the winter, while for NYPA the peak occurs in summer. The contracts allow each system to receive power during its high-demand season and deliver power during its low-demand season.



Signing a contract with New York Power Authority

Under the first contract, signed on October 31, NYPA will deliver 400 megawatts of power on demand, between November 1 and March 31, from 1989 to 2011. Hydro-Québec estimates these purchases will cost a total of $380 million. Under the second contract, which was signed on January 23, 1990, Hydro-Québec will sell NYPA 800 megawatts of power and 3 billion kilowatt-hours of energy per year, between April 1 and October 31, from 1999 to 2018. Revenue from these sales should reach $8.5 billion.

Hydro-Québec obtained a new licence from the National Energy Board to continue to deliver 800 megawatts of diversity power to NYPA until a 1974 contract expires in 1998. Hydro-Québec also requested two export licences from the National Energy Board: one covering a 450-megawatt contract signed with Vermont Joint Owners in April 1987; the other for the 1,000-megawatt contract signed with NYPA in April 1989.

On January 9, 1989, the Maine Public Utilities Commission turned down Central Maine Power Company's request for approval of a contract with Hydro-Québec. This contract was for the purchase of three 100-megawatt blocks of firm electricity which Hydro-Québec was to deliver starting in 1992, 1995 and 2000 respectively, with option to purchase an extra 300 megawatts. In April, the Maine Public Utilities Commission refused to reconsider the decision that had already been handed down. In October, Hydro-Québec terminated the contract, as allowed by the contract provisions.

- *It was already apparent at the end of 1987 that electricity demand was growing faster in Québec than forecast. Hydro-Québec's response was to return to expanding its power system, without losing sight of the need for reliable facilities to provide the Québec public with the best possible service.*
- *During 1989, Hydro-Québec stepped up its drive to meet these growing needs. It injected new capital to improve the existing power system and advance the commissioning of a number of new installations. Future activities, as well as projects already under way, will be guided by major programs designed to maximize the effects of this corporate drive.*
- *Furthermore, Hydro-Québec adopted two policies in 1989 that are important to smooth functioning of the power system. These policies set forth principles and guidelines that provide a more solid framework for the utility's maintenance and telecommunications activities.*

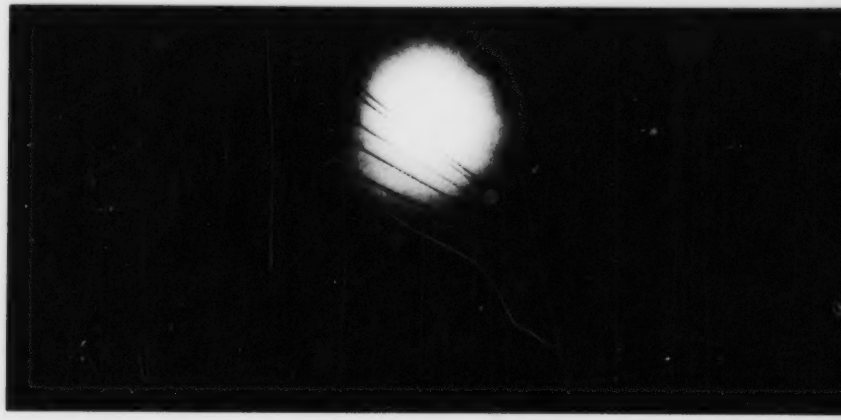
Status of Installations

- Hydro-Québec is 45 years old, and some of its power-system facilities are older. Since 1988, the utility has been carrying out an in-depth assessment of the status of its strategic installations. By the end of 1989, 47 – almost three-quarters – of these key installations had been evaluated and a number of corrective actions taken.
- During the year, the evaluation program was extended to the other 321 important installations. By year-end, 169 of these facilities had been reviewed by regional committees specially set up for the purpose.

Maintenance

- While continuing maintenance activities that have been in effect for many years, Hydro-Québec adopted a maintenance policy for its facilities in June which emphasizes preventive maintenance based on monitoring. The aim is to ensure the availability of installations. This new type of maintenance involves timely, well-chosen interventions – when and as required. It should lead to a review of major maintenance practices and make it possible to optimize work on the generating, transmission, distribution and telecommunications systems.

- Alongside this policy, a Maintenance Enhancement Program was introduced in 1989. This program sets forth activities – modifications, replacements, repairs and maintenance – covering all Hydro-Québec's power-system facilities. Launched early in July, the program will continue until 1996. The sums invested in 1989 served to correct anomalies identified by the committee responsible for evaluating strategic installations, to hire staff, train new and current employees, and also plan and set in motion work for 1990 and 1991.
- *To reinforce the transmission system* and increase its reliability, Hydro-Québec established a Reliability Enhancement Program which specifies transmission projects to be carried out between 1989 and 1994, along with the necessary funding – $1.3 billion.
- In view of its recently revised design and operating criteria, Hydro-Québec has decided to install series compensators on its 735-kilovolt transmission system. This equipment will strengthen the entire system, which is especially sensitive to voltage fluctuations because of the exceptional length of its lines. The new equipment will be commissioned on a gradual basis between now and 1994.
- *The reliability of the distribution system* increased noticeably in 1989. Hydro-Québec made additional investment in a second Service Quality Enhancement Program, known by its French acronym, PAQS 2. The utility's goal was to reinforce the older parts of the distribution system and consolidate progress to date. Extensive work associated with this program required the creation of 99 permanent positions. By year-end, 90 of these positions had been filled and some $15 million invested.
- *Power-system control.* Early in the fall of 1989, Hydro-Québec introduced a plan for upgrading power-system control. In effect



Distribution line

until 1991, this initiative involves the hiring of personnel for operations, support and technical training. The plan aims to speed up automation of the system control centre and the nine regional control centres. A preliminary study on replacement of all system control centre equipment, initiated in 1989, should be ready by the end of 1990. As for the utility's distribution control centres, all the equipment has now been installed in 14 of the 16 centres, seven of which went into service in 1989.

- *The adoption of Hydro-Québec's telecommunications policy* introduced a new set of principles to guide the planning, design, installation, maintenance and operation of the utility's telecommunications infrastructure and services.

RESERVOIR MANAGEMENT

- Hydroelectric generating stations represent almost 95% of Hydro-Québec's total electrical generation. Hence the importance to the utility of effective reservoir management.
- *The water level of reservoirs* known as annual reservoirs rises during the summer, following the spring rains and melting of snow. During this period, electricity demand is low. As winter passes, the water in the reservoirs is run through the generating stations. If runoff has been low, causing a shortage of water in the utility's annual reservoirs before the next spring rains, backup is provided by another type of reservoir, called multi-annual. Much larger, these reservoirs store quantities of water which are generally sufficient to offset the effects of low runoff during lean years.
- Since 1984, Hydro-Québec has experienced six successive years of low runoff; in four of those years, runoff levels were well below average. Thanks to energy surpluses it had available until 1987, the utility barely felt the negative impact during the first few years. Since then, however, it has had to take a number of measures to carry it through until the situation improves. These measures include halting surplus-electricity sales in Québec and on export markets; making greater use of Tracy thermal generating station; purchasing more energy from neighboring systems; and encouraging dual-energy customers in the commercial, institutional and industrial sectors to make greater use of their backup energy source.

- *At Manic 5 PA power station,* the first generating unit went into service in spring 1989. A second unit followed at the end of the year, and all four units at the facility should be operational by the spring of 1990.
- *Phase I of the La Grande complex.* At the La Grande 2A construction site, work is proceeding at a good pace. This generating station will be able to produce 950 megawatts by the winter of 1991-92, and twice that amount the following winter.
- The Radisson-Nicolet-des-Cantons project is going ahead as planned. In addition to serving southern Québec, this 450-kilovolt direct-current link will allow Hydro-Québec to export energy from La Grande 2 to New England. The new line will go into commercial service in the fall of 1990. The temporary overhead line spanning the St. Lawrence River near Grondines was ready by November. Later, it will be replaced by a permanent under-river line now being built. November also saw the start of construction work on the line's ground electrode at lac Duncan.
- After testing, a converter at Radisson substation will be commissioned in 1990, as scheduled. Work on the infrastructure for Nicolet substation is proceeding according to the master plan, and the converter should be in service by 1992.
- *Phase II of the La Grande complex.* As mentioned, in order to meet projected needs between 1993 and 1995, Hydro-Québec has decided to build certain facilities earlier than scheduled. Brisay generating station, part of the La Grande complex, Phase II, will go into service in 1993 – two years ahead of schedule. Similarly, Laforge 1 will begin operations in 1994 rather than 1995. These plants will add 380 and 820 megawatts, respectively, to Hydro-Québec's installed capacity. La Grande 1 generating station, with a capacity of 1,310 megawatts, will go into service in 1994 and 1995, as planned. Draft-design studies for Laforge 2 power station were completed in 1989.
- The utility's 12th 735-kilovolt transmission line will bring electricity from La Grande 1, Laforge 1, Laforge 2 and Brisay gener-

La Grande 2 A construction site

Manic 5 PA generating station

Temporary overhead line across the St. Lawrence near Grondines

ating stations to major consumption centres. Draft-design studies for this construction project are now under way. A comparison of various corridors led to the selection of a route for the transmission line between Chissibi substation and the boundary of territory governed by the *James Bay and Northern Québec Agreement*. A new round of consultations with local communities and organizations began in the summer of 1989, with a view to determining routes and appropriate mitigation measures. The northern segment of the 12th line is due to be commissioned in 1993, followed by the southern segment in 1994.

- *Ashuapmushuan hydroelectric project.* Phase I of the draft-design studies for the two generating stations on the rivière Ashuapmushuan are now under way. The analysis of technical and economic aspects, which began early in the year, is making good progress and will enable the utility to select the best sites for the Ashuapmushuan 3 and Ashuapmushuan 4 hydroelectric generating stations. Related environmental and social issues have been under study since the spring of 1989.
- *Sainte-Marguerite development.* Hydro-Québec received authorization to begin phase II of the draft-design study of Sainte-Marguerite power station, with an approximate capacity of 800 megawatts. Reports summarizing the results of these studies should be ready in the spring of 1990.
- *Grande Baleine complex.* Studies carried out in 1989 reviewed development plans for the Grande Baleine complex. Hydro-Québec performed these studies to ensure the complex will respect the new operating and maintenance criteria now in effect.
- *Peak demand.* The present situation indicates that demand for electricity at peak periods will continue to rise steadily. To meet these needs, in December Hydro-Québec authorized the addition of gas turbines at La Citière generating station to provide an extra 500 megawatts; given sufficient need, this could be raised to 750 megawatts. The utility has also begun a draft-design project with a view to building a new gas-turbine generating station near Bécancour, which would provide an extra supply of 150 to 200 megawatts.

| *The drive to improve service quality and productivity was at the root of everything Hydro-Québec did in 1989. This was as evident in the human resource area as anywhere, because realizing this goal means mobilizing the men and women who make up the organization.*

| *Nineteen eighty-nine was a year of labor relations, in which 11 collective agreements that had expired in 1988 were up for renewal. As three out of every four employees belong to a union, renewing these agreements was central to managing human resources.*

| *As part of this resource mobilization process, the utility continued to redefine and enhance the roles of its managers and specialists, promoted training and development in various job categories, and worked on improving its health and safety record.*

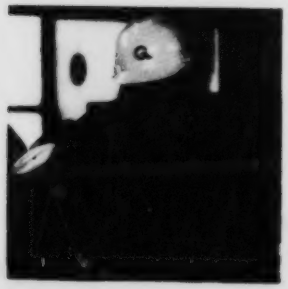
The Men and Women of Hydro-Québec

| *Staff on the rise.* The number of permanent staff rose from 19,252 in 1988 to 19,437 on December 31, 1989, that is, by 1%. Temporary staff averaged 4,425 in 1989 compared to 3,521 in 1988, a 26% rise. The overall increase was mainly due to higher demand in units responsible for upgrading the power system and the quality of service. As more staff will be recruited from outside over coming years, the utility began revising its procedures for hiring unionized staff. A series of improvements were recommended, designed to orient hiring towards people who are more highly qualified and more in tune with Hydro-Québec's corporate culture.

| *Greater numbers of women.* The percentage of women employees rose from 19.5% in 1988 to 19.8% in 1989. During the year, the utility set itself a 10-year quantitative goal under the equal opportunity program it established in 1988 to accelerate development in this area: by 1999, it intends 30% of its permanent staff to be women. This goal was reaffirmed during the fall at a conference of the utility's women managers, specialists and engineers.

Hydro-Québec's Chairman and President visit a company day-care centre, Le petit réseau.

| *New day-care policy.* After assessing two pilot day-care projects in 1988, Hydro-Québec adopted a new policy on day care in the workplace. The existing facilities will therefore continue to operate and new ones will be added when there is sufficient demand. The space provided by the utility for this purpose helps staff fulfill their family responsibilities.



LABOR RELATIONS

| *Four agreements signed.* Hydro-Québec signed agreements with its 1,200-member engineers union, the *Syndicat Professionnel des Ingénieurs de l'Hydro-Québec (SPIHQ)*, and with three of the four unions that represent its temporary construction site personnel. In addition, the working conditions and remuneration of the temporary construction staff governed by Québec's *Decree for the Construction Industry* were updated when the decree was extended.

| *New union formed.* The *Syndicat Professionnel des Scientifiques de l'IREQ*, which represents the researchers and test engineers of Hydro-Québec's technology, international affairs and IREQ group, received accreditation in May and reached an agreement on salaries for 1989 in December. Negotiations are continuing on the union's first collective agreement.

| *Tense dialogue with CUPE.* The collective agreements between Hydro-Québec and its Canadian Union of Public Employees (CUPE) locals – covering clerical, trades and technical workers – expired over a year ago. In December 1988, CUPE and Hydro-Québec each placed draft collective agreements on the bargaining table. Since then, the utility has called in a conciliator who attempted without success to bring the parties to agreement in 1989. A number of strikes and slowdowns took place, and it was necessary for Québec's essential services commission, the *Conseil des services essentiels*, to intervene on several occasions to prevent the labor conflict from having an undue effect on the utility's customers.

| The utility's aim in these negotiations is to improve the continuity and quality of service, which it cannot achieve without maintaining its management flexibility and settling the current dispute

on contracting out. It also wishes to continue to reduce its staff's remuneration lead over comparison job markets, and to clarify commitments with respect to training and to retraining staff for new duties.

Redefining the Roles of Managers and Specialists

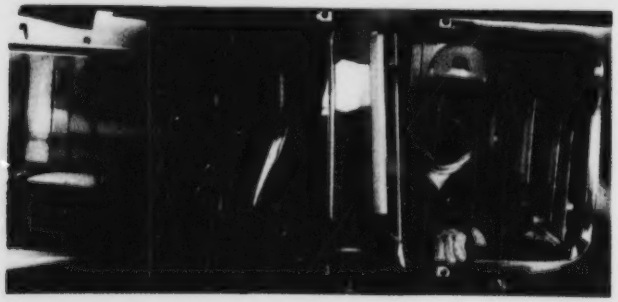
- *Programme Action-cadres.* Hydro-Québec's *programme Action-cadres* is a special three-year program launched in 1988 to redefine and enrich the roles of its managers. In 1989, the utility established a procedure for keeping its managers closely informed about ongoing labor negotiations and consulting them about the issues involved. It also took steps to deepen management understanding of its financial statements and budget processes, and put together a training program for new managers that will begin in 1990. In addition, in order to enhance the quality of first-level management, the work of trades supervisors was reviewed to increase their direct contact with their teams.
- *Management scheme for specialists.* The utility has some 3,200 specialists, whose duties complement those of its managers. In 1989, Hydro-Québec continued setting up a management scheme that will clarify the roles of its specialists, increase their mobility and reconcile their salary scales. In 1990, the first stage of the scheme, covering the organization of work, hiring, promotion and remuneration, will take effect, and the second stage, covering professional development and career planning, will be initiated.

A First-Class Working Environment

- *Training for excellence.* Hydro-Québec believes in the power of training and professional development to improve the quality of service, raise its employees' job satisfaction levels, and help them adapt to technological change. It is therefore intensifying its training efforts to meet the needs of specific job categories.
- Unionized clerical workers now receive specialized training when moving to a new job and preparatory training for more complex positions; in 1989, over 400 people enrolled in the preparatory

sessions. The utility also began setting up an information system that summarizes the qualifications of each of its engineers. The information will then be available for comparison with company needs, and will make it easy to identify which of the engineer's fields of expertise need to be developed.

- A career plan and professional development program was created for managers and specialists in finance and administration. The *programme Action-cadres* and the new specialists' management scheme offer professional development activities for all the utility's managers and specialists.



- *Towards an improved health and safety record.* Hydro-Québec has been progressively implementing the International Safety Rating System (ISRS) since 1984. This system offers concrete ways of improving safety, and rates health and safety performance according to five levels. During 1989, the utility reached level 1.4. As the rating agency has raised its criteria, Hydro-Québec has reviewed its plan of action, bringing forward the scheduling of a number of activities in order to reach its objective – attaining level 4 by 1993.
- Concurrently, Hydro-Québec gave just over 4,000 employees the general training required under the Workplace Hazardous Materials Information System (WHMIS), a system provided under Québec's *Act Respecting Occupational Health and Safety*. In 1990, it will train those employees who are more directly exposed to hazardous materials regarding the risks associated with chemical products being used in the utility.
- *Protecting non-smokers.* In March 1989, Hydro-Québec adopted a directive protecting non-smokers, which extended the smoking ban on Hydro-Québec premises to meeting rooms, health centres, and parts of rooms where food is consumed. Hydro-Québec has been subject to the *Act Respecting the Protection of Non-Smokers in Public Places* since 1987.

AT THE LEADING EDGE OF PROGRESS

- ***In 1989, Hydro-Québec made a very significant investment in technology-related activities. These activities were carried out within the framework of the* Technology Plan 1989-1991, *the utility's first integrated corporate plan for technological development.***
- ***Hydro-Québec International continued to reinforce its reputation on foreign markets by sharing its parent company's expertise with clients in many countries.***

- *R&D in support of power-system operation and expansion.* In 1989, Hydro-Québec's research and development activities focused primarily on power-system reliability, protection and computerized monitoring, and on managing electricity demand.
- Among the year's highlights, considerable progress was made in tests related to the construction of Hydro-Québec's 11th major transmission line. The utility has begun testing to demonstrate the satisfactory performance of prototype 500-kilovolt cables for its underwater crossing of the St. Lawrence River. Other tests involved a new wall bushing specially designed for a 500-kilovolt direct-current system, and six power transformers built by Asea Brown Boveri Inc. (ABB) for the converter at Radisson substation.
- Meanwhile, simulator studies of series compensation moved on to new stages. The end of March saw completion of simulator tests to establish the energy constraints on the series capacitors. Then, in July, Hydro-Québec researchers began simultaneous evaluation of 10 protection systems to be used on series-compensated lines.
- Also tested were five new prototype surge arresters for the distribution network. Only the polymer concrete explosion-proof surge arrester designed by Hydro-Québec met the utility's very stringent safety requirements. The new arrester will protect the 400,000 transformers on the distribution network.

14th Congress of the World Energy Conference

Explosion-proof surge arresters

HYDROBOT, contemporary equipment for turbine maintenance

Prototype equipment for treating cystic fibrosis

- During the year, the utility developed new tools for monitoring and controlling its power system. At Manic 5, it installed the first prototype of a computer-based system for automatic control of generating stations; and it further developed the system for use in future generating facilities.
- In terms of managing electricity demand, two achievements are worthy of note. The first was the installation of 48 integrated dual-energy heating units in the homes of residential customers, to evaluate the units' performance during the winter season. Hydro-Québec also produced a prototype heat pump with a nonelectric auxiliary heat source, known by its French acronym PACANE, and installed 20 pre-production units in customers' homes in the Mauricie region for evaluation over an extended period.
- *State-of-the-art laboratories.* In 1989, Hydro-Québec reached the end of a major period of investment in expanding and consolidating its laboratory facilities.
- The utility spent $7 million on a supercomputer and network of workstations for numerical analysis of the power system. It also built a new testing facility for high-voltage underground cables. This facility, unique in the world, represents a total investment of $13 million, of which $8 million was spent in 1989.
- Hydro-Québec's electrochemical and electrical technology research laboratories (LTEE) acquired new pre-pilot test facilities during the year. LTEE commissioned a pilot furnace designed for plant drying tests, and installed electrosynthesis test benches aimed at developing electrochemical processes with industrial partners.
- *Promising avenues of research.* Throughout the year, Hydro-Québec continued its program of exploratory research with its partners. This program pursued four subjects in particular.
- First, in the field of superconductivity, Hydro-Québec pooled its expertise with two companies: Atomic Energy of Canada Limited and Canada Wire and Cable Limited. The joint effort is aimed at developing new ways of manufacturing wires that incorporate superconducting ceramics at high temperatures. Secondly, in the area of nuclear fusion, Hydro-Québec began adapting the Varennes tokamak in preparation for a vast cooperative

Testing 500-kilovolt, direct-current cables

endeavor – the International Thermonuclear Experimental Reactor (ITER) project – which aims to design a large experimental fusion reactor by the end of 1990. Also on Hydro-Québec's agenda is research on expert systems, computer tools for designing, managing and operating its power system. Finally, the utility is pursuing research on ACEP polymer-electrolyte batteries for energy storage and electric vehicle propulsion.

- *Developing and marketing innovative products.* Development and marketing activities in 1989 continued efforts already under way. For example, plans are being prepared to build a plant for manufacturing prototypes of small ACEP batteries in a joint venture with an industrial partner.
- Meanwhile, Hydro-Québec has begun exploring new applications for its power-system control and instant-imaging systems, for which municipalities are a possible market. A joint-development proposal is now under study with a Québec municipality.
- The activities of Nouveler Inc.'s subsidiaries were consolidated in 1989. Nouveler Inc. divested itself of certain assets, among them holdings in Éconoler Inc. and Éconoler International. CYME International had a good year, as sales rose 50% to $2 million. The company obtained new licences to market software for the engineering of lines and substations. A new subsidiary, Strateck Technologies International, was formed in February 1989. Since then, Strateck has begun to market MECO (Mainframe External Control of Operations) software, designed for monitoring and control of large central computers. As for Vibro-Meter Inc., it continued to score points on export markets, marketing systems for generator monitoring and protection. During 1989, Hydro-Québec awarded six new licences and acquired 12 new patents on its products.
- Another development in 1989 was an agreement between Hydro-Québec and ABB to launch the *Centre d'innovation sur le transport de l'énergie du Québec* (CITEQ). This power-transmission research and development company will focus its efforts on technological innovation, combining Hydro-Québec's power-system building and operating experience with ABB's expertise in manufacturing and marketing electrical equipment.

Expertise that Reaches Around the Globe

- *Highly valued experience.* In 1989, Hydro-Québec International (HQI) exported Hydro-Québec's know-how,

Hydro-Québec International exports Québec know-how to some 30 countries.

especially in the area of power-system interconnections. Among other activities, it performed studies for countries in the Middle East and Africa. HQI also set forth the terms of reference for a study of a Zaire-Egypt interconnection, undertaken on behalf of the African Development Bank. Two major interconnection studies were carried out in 1989. One, conducted with the engineering firm Lavalin, concerned power systems on the Arabian peninsula. The other, with Ontario Hydro, covered an interconnection linking Egypt, Jordan, Iraq, Syria and Turkey.

- *A wide variety of services.* HQI completed a study begun in 1988 to set up a plan for expanding Madagascar's generating and transmission systems at the lowest possible cost. Technical-support activities will continue until at least the spring of 1990.
- Also completed was a feasibility study of the transmission line to carry power from Manantali hydroelectric generating station to the three member countries of the agency responsible for the development of the Senegal River *(Organisation pour la mise en valeur du fleuve Sénégal)*. The study was carried out with two firms: Tractebel and EDF International.
- A consortium composed of Tractebel and Hydro-Québec International began supervising construction work on a 150-kilovolt line, some 230 kilometres long, that will link the cities of Bamako and Ségou in Mali.
- Hydro-Québec International also pursued studies related to implementation of the Nachtigal project, involving the development of a 260-megawatt power station on the Sanaga River, in Cameroon.
- Finally, Hydro-Québec International continued to provide technical assistance to Cameroon's national electricity company, SONEL, as part of a major cooperative program launched several years ago.
- *Energy and the future.* Hydro-Québec was closely associated with the 14th Congress of the World Energy Conference, held in Montréal in September 1989. During this event, Hydro-Québec International and Hydro-Québec were able to take part in an international dialogue on future energy options with several hundred participants. Delegates exchanged views on a number of proposed solutions to the technical, environmental and other challenges of the 21st century. The congress also gave Hydro-Québec an opportunity to promote some of its innovative products.

- ***For nearly 20 years now, Hydro-Québec has been actively concerned with the impact of its activities on the human and natural environment. In 1989, the utility chose to commit itself to an approach originally put forward by the World Commission on Environment and Development: the concept of sustainable development.***
- ***Hydro-Québec continued its research into various aspects of the environment by working closely with outside partners. At the same time, it kept up, and indeed intensified, dialogue with representatives from various communities and interest groups, through studies, consultation and agreements.***

Because of its direct or indirect involvement in many spheres of activity, Hydro-Québec makes a dynamic contribution to Québec's growth.

The Environmental Challenge

- *Subscribing to the concept of sustainable development* has committed Hydro-Québec to meeting current energy requirements without compromising the ability of future generations to meet their needs. To ensure this concept is well integrated into its many projects, the utility continued its study of the cumulative environmental impacts of all its power-system installations, including existing facilities and those being planned.
- In 1989, Hydro-Québec also continued measures to eliminate polychlorinated biphenyls (PCBs). These efforts were mainly concerned with ensuring that storage sites are safe and conform to legal requirements.
- Hydro-Québec also monitors research on the biological effects of electric and magnetic fields. One study, conducted by Bonneville Power Administration, was sponsored by Hydro-Québec and eight other electricity companies. The study looked at the effects of an extra-high-voltage, direct-current transmission line on an agricultural milieu. The results released in 1989 showed that electromagnetic fields had no effect on the health and fertility of livestock, or grain production, in the area under study. A joint epidemiological study with Ontario Hydro and *Électricité de France* is making good progress in investigating the relationship between incidence of cancer and exposure to electric and magnetic fields.
- Vegetation growing on Hydro-Québec rights-of-way can interfere with the operation and maintenance of power-system facilities. It is therefore necessary to limit the proliferation of plants in such areas. In 1989, a research program was launched to study biological methods to be used for vegetation control, as opposed to mechanical or chemical methods. Over a period of

six years, this program will attempt to minimize the use of herbicides and limit cutting activities on rights-of-way.

- Hydro-Québec again participated in the work of the James Bay Mercury Committee in 1989. Fishing camps were established from which the Cree population of Wemindji can catch migratory fish whose mercury levels pose no danger to human health. Also in the area of fishing, Hydro-Québec continued a program whereby landlocked salmon (ouananiche) are being introduced into the Outardes 2 reservoir. Radiotelemetry is used to track the movements of this new fish population. Elsewhere, a channel opened through a jetty that supports Hydro-Québec towers in the St. Lawrence River near Grondines, allowed Atlantic tomcod to migrate upstream towards the rivière Sainte-Anne. An atlas containing a series of maps that illustrate the salmon-breeding potential of Québec's Côte-Nord region was updated, and research was conducted into the ecology of salmon in the rivière Moisie.
- Hydro-Québec signed an agreement with the *Fondation de la faune du Québec* in 1989. As a founding sponsor of this wildlife organization, the utility agreed to give $250,000 per year to the *Fondation*, between 1990 and 1995. This financial contribution will help initiatives designed to preserve and promote wildlife and natural habitats throughout Québec.
- *Impact assessment studies.* From the earliest stages of its projects, Hydro-Québec ensures that the environment is considered along with economic and technical issues. Impact assessment studies are the means of doing so, and help in identifying appropriate mitigation measures.
- In 1989, environmental and technical studies were carried out as part of phase I of the draft design for development of the rivière Ashuapmushuan. Other draft-design studies were undertaken with regard to the 12th and 13th lines of Hydro-Québec's 735-kilovolt transmission system. Following the decision to relaunch the Grande Baleine project, it was necessary in 1989 to update environmental studies that had been performed some years ago. Major topics covered include the infrastructure giving access to the site, land use by native peoples, social and economic impacts, and physical and biophysical milieux.
- *Ongoing consultation.* Hydro-Québec is careful to ensure that it meets the requirements of local, provincial and federal governments. In 1989, the utility received some 20 government authorizations to begin studies, and several other permits that allowed it to go ahead with construction work.
- In general, Québec's native communities collaborate on studies that concern their respective territories.

Recently, Hydro-Québec has intensified its dialogue with the Atikamekw and the Montagnais, thanks to two agreements, the *Entente cadre* and the *Entente sur les mesures provisoires*, between the *Conseil des Atikamekw et des Montagnais* and the Canadian and Québec governments. Another agreement in principle was reached with Indian and Northern Affairs Canada. This involves the transfer to Hydro-Québec of independent generating systems which the federal department operates in two Atikamekw communities in the Haut-Saint-Maurice region.

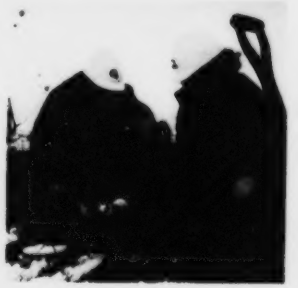
- To encourage all its employees to become actively involved in protecting the environment, Hydro-Québec organized a number of activities in May, designated "Environment Month." These activities made employees more aware of the utility's concerns and accomplishments in this area.

Hydro-Québec's Place in Culture and Society

- In cooperation with the *Université du Québec à Montréal*, *Université Laval* and the *Institut national de la recherche scientifique*, Hydro-Québec continued its community program through a series of Hydro-Québec lectures held in Montréal and Québec City. Eight lecturers dealt with a variety of topics, linked by the common theme of "Environment and Health."
- With an eye to the upcoming generation, Hydro-Québec continued to encourage young people in many ways: research grants, assistance to movements such as MILSET (International Movement for Leisure Activities in Science and Technology), tours and training sessions for students, information booths, brochures dealing with electricity, and grants to university laboratories.
- Finally, the Centraide (United Way) community fund-raising campaign is an excellent example of the support given by Hydro-Québec and its employees to humanitarian causes: the 1989 campaign brought in a total of nearly $935,000.

Boosting Québec's Economic Expansion

- Through its purchases of goods and services in 1989, Hydro-Québec injected more than $1.4 billion into the provincial economy. The Québec content of this total was 57% of goods and 94% of services, that is, an average of 76% overall. The utility intends to use a variety of new measures to increase the Québec content of its purchases, especially in the category of strategic equipment required for the power system. Jobs directly or indirectly sustained by utility activities represented 62,000 person-years. Through its operating and investment activities, Hydro-Québec makes a direct and indirect contribution equivalent to 5% of Québec's gross domestic product.



Hydro-Québec's environment experts are involved at every stage of its projects.

Producing 118 billion kilowatthours of hydropower means keeping a careful eye on reservoir water levels.

| ***Three major features emerge from the financial portrait of 1989. In the foreground is service quality, which Hydro-Québec made a top priority in 1989. Then there is the goal, pursued throughout the year, of strengthening the utility's financial position. And in the background is the difficult context in which the utility had to operate, due to six successive years of low runoff.***

| The new programs introduced in 1989 to enhance the quality of service and the reliability of installations resulted in expenses that are reflected in the year's operating expenses and investments.

| Furthermore, the strategic decisions Hydro-Québec took to minimize the risks associated with fluctuating interest and exchange rates had an effect on the debt, interest expense and exchange loss.

| The low runoff led Hydro-Québec to reduce deliveries of surplus energy, increase electricity purchases from neighboring systems, and operate Tracy thermal-generating station more frequently, thus increasing fuel-oil consumption. In addition, the utility paid compensation to dual-energy customers in the commercial, institutional and industrial sectors who agreed to use their backup energy source on a temporary basis.

| These factors had a direct impact on the year's results and largely explain the decline in net income. However, the overall decline was lessened by the effect of growing demand and the year's exceptionally cold temperatures on firm-electricity sales in Québec. Net income went from $619 million in 1988 to $565 million in 1989, a decrease of 8.6%.

TOTAL SALES

| In view of the prolonged low runoff conditions and the level of priority electricity needs in Québec, the utility virtually discontinued sales of surplus electricity. Consequently, there was a decline in total sales volume, which, at 137.6 billion kilowatthours, was down 7.8 billion kilowatthours from 1988. However, the effect of sharply reduced surplus-electricity

VARIATIONS IN RUNOFF INDEX

The index shows natural runoff levels in relation to an average reference value, set at 100. These natural levels depend on factors that cannot be controlled.

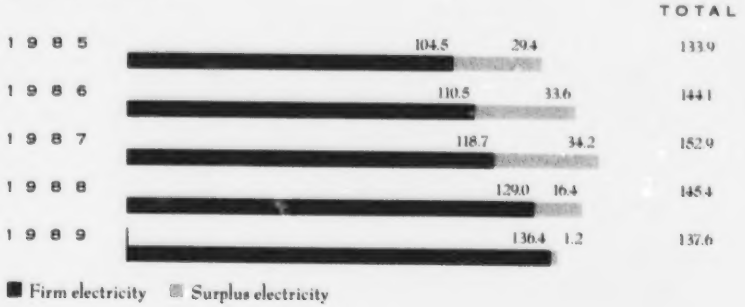
sales on total sales was partially offset by a 7.4 billion-kilowatthour rise in firm-electricity sales, of which 2.2 billion kilowatthours were attributable to the unusually cold weather experienced in 1989. This growth, combined with rate increases, resulted in an increase of $280 million, or 5.4%, in total sales revenue.

The total volume of Québec sales in 1989 was 127.9 billion kilowatthours, down 0.5% from 1988 sales of 128.5 billion kilowatthours. This drop is attributable to the decline in surplus-electricity sales, which fell by 8.4 billion kilowatthours, or 96.5%. Firm-electricity sales, however, rose by 7.8 billion kilowatthours, or 6.5%, over 1988. Part of this increase is explained by the year's exceptionally cold weather. Despite the lower volume, revenue from Québec sales rose by $443 million, or 9.3%, to $5,195 million. This growth in total revenue is explained by the higher volume of firm-electricity sales, and by the 1988 and 1989 rate increases which produced additional revenue of $205 million.

TOTAL SALES

(billions of kilowatthours)

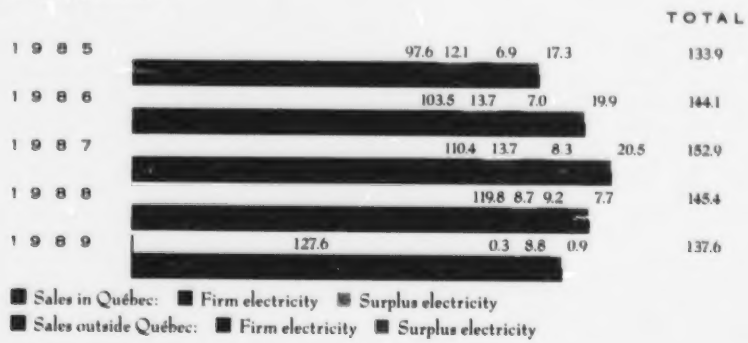
FIRM AND SURPLUS ELECTRICITY



TOTAL SALES

(billions of kilowatthours)

FIRM AND SURPLUS ELECTRICITY BY MARKET

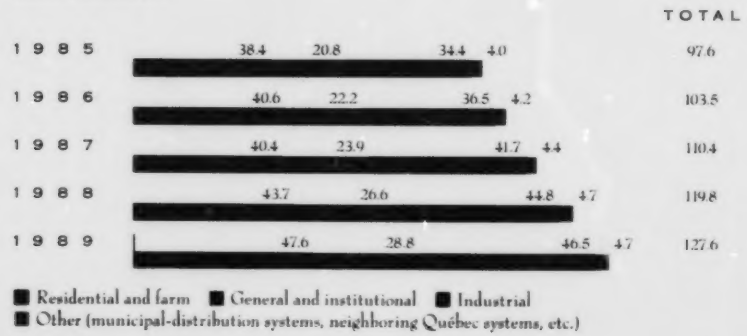


FIRM-ELECTRICITY SALES

- *Residential and farm sector: +8.9%.* Sales in this sector reached 47.6 billion kilowatthours, 3.9 billion more than in 1988. This 8.9% increase, comparable to the previous year's, is largely the result of strong construction activity in 1988 (the full effect of which was felt only in 1989), combined with 48,000 new housing starts. Electric heating held more than 90% of the new housing market. Furthermore, the unusually low temperatures of 1989 led to additional consumption of 1.7 billion kilowatthours.
- Revenue from sales in the residential and farm sector totalled $2,215 million in 1989, $250 million or 12.7% more than in 1988. Some $91 million of this increase can be attributed to the 1988 and 1989 rate increases, and $75 million to the cold weather conditions.
- *General and institutional sector: +8.2%.* General and institutional sales in 1989 reached 28.8 billion kilowatthours, an increase of 2.2 billion over 1988. This growth is mainly explained by newly constructed buildings and office space.
- Revenue from sales in this sector was $1,414 million, up $132 million or 10.3% over 1988. The 1988 and 1989 rate increases generated $53 million of this growth.
- *Industrial sector: +3.8%.* Industrial sales in 1989 totalled 46.5 billion kilowatthours, 1.7 billion or 3.8% more than in 1988. Most of this growth was due to the strong performance of a number of industries, notably pulp and paper and smelting and refining.
- Sales revenue was $1,356 million, an increase of 12.6% or $151 million over 1988, of which $55 million is attributable to the 1988 and 1989 rate increases. Some $23 million in additional revenue came from the Industrial Rate Discount Program, which provides industrial customers with discounts on an annually declining scale. The larger sales volume, and the renegotiation of provisions in some contracts, led to a further $73 million in revenue growth.

SALES OF FIRM ELECTRICITY IN QUÉBEC

(billions of kilowatthours)



SURPLUS-ELECTRICITY SALES

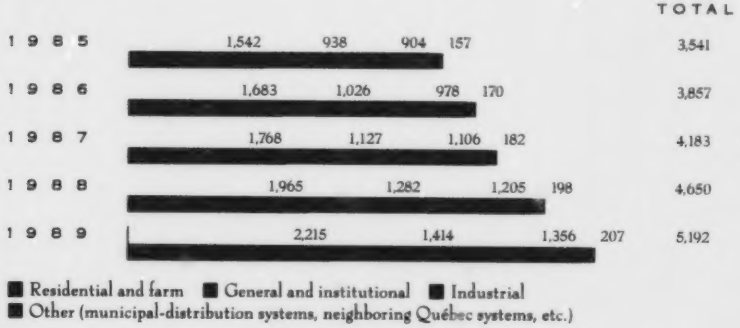
- Surplus-electricity sales in Québec stood at 0.3 billion kilowatthours in 1989, and accounted for $3 million in revenue. All surplus-electricity sales contracts were ended in 1989, causing a precipitous 8.4 billion-kilowatthour, or 96.5%, decline in deliveries. The result was a $99-million drop in revenue.

SALES OUTSIDE QUÉBEC

- The total volume of export sales declined by 42.5% to 9.7 billion kilowatthours. This compares with 16.9 billion kilowatthours in 1988, which in turn was down sharply from the peak reached in 1987.
- Because of low runoff and the growth in firm-electricity demand in Québec, Hydro-Québec was obliged to reduce its sales of surplus energy. These sales on external markets dropped from 7.7 billion kilowatthours in 1988 to 0.9 billion kilowatthours in 1989. However, 1989 export sales of firm electricity remained relatively stable at 8.8 billion kilowatthours, a slight decrease of 0.4 billion or 3.6% from 1988.
- The volume of exports to neighboring Canadian power systems declined by 20.1%, from 5.0 billion kilowatthours in 1988 to 4.0 billion in 1989. Deliveries to the United States were down by 51.9%, from 11.9 to 5.7 billion kilowatthours.
- Revenue from sales outside Québec was $308 million, compared with $471 million in 1988, down 34.7%. The percentage drop in sales revenue, however, was less than the decline in sales volume. This is because reduced quantities of electricity available for export enabled Hydro-Québec to sell to the most profitable markets; as a result, the average unit price for energy sold rose from 2.79 cents per kilowatthour in 1988 to 3.17 cents in 1989.

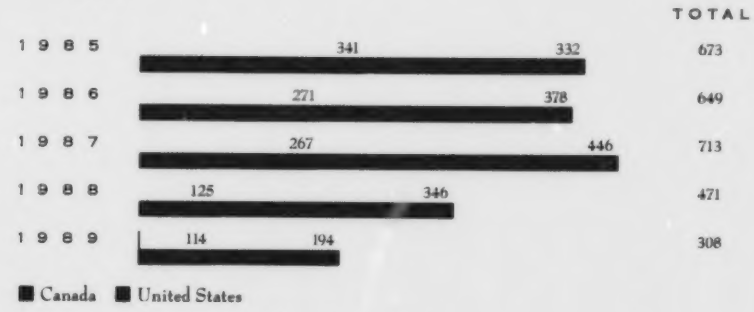
REVENUE FROM FIRM-ELECTRICITY SALES IN QUÉBEC

(millions of dollars)



REVENUE FROM EXPORT SALES

(millions of dollars)

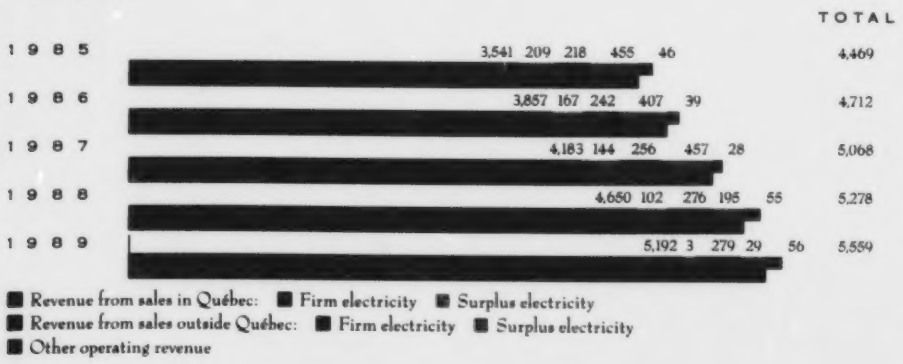


TOTAL EXPENDITURE RISES BY $399 MILLION

- At the end of 1989, total expenditure was $2,759 million, up 16.9% over 1988. Operating expenses alone accounted for $1,597 million, an increase of $206 million or 14.8%.
- The decline in reservoir water levels led to various supplementary expenses in 1989. For example, the increased use of Tracy generating station caused fuel-oil expenses to rise by $34 million. Moreover, commercial, institutional and industrial dual-energy customers received $76 million in compensation for temporarily switching to backup fuel sources.
- The priority given by Hydro-Québec to improving the quality of service and the reliability of installations led to specific expenses in 1989, notably in the area of equipment maintenance. This work was carried out as part of the special programs introduced during the year.

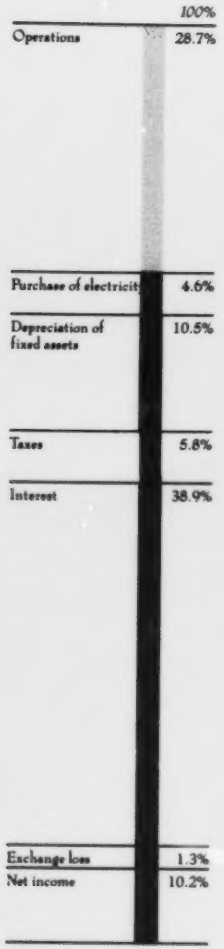
GROSS REVENUE

(millions of dollars)



- With the exception of these major factors, other operating expenses showed a moderate increase, attesting to the utility's ongoing cost-containment efforts. This increase can be attributed mainly to growth in payroll expenses, partially due to increased hiring.
- In addition, for the first time, this year a portion of future expenses related to the dismantling of Gentilly 2 nuclear generating station, and to the disposal of its irradiated fuel, was included in expenditure. Additional annual amounts will be set aside in the consolidated financial statements in the years to come, until the generating station has reached the end of its service life.
- Among other expenses, the largest percentage increase was for electricity purchased, up 86.1% because of low runoff. To provide for the possibility of another year of low runoff, the utility established a supplementary energy purchase program. In 1989, purchases under this program, mainly from New Brunswick, amounted to $104 million.
- Depreciation of fixed assets rose 8.6% in 1989. The commissioning of a variety of new facilities and equipment, including two generating units at Manic 5 PA, contributed to this increase. In 1989, depreciation of fixed assets totalled $585 million.
- Finally, as of December 31, 1989, taxes reached $324 million compared with $295 million at the corresponding date in 1988. This rise is partly explained by the

ALLOCATION OF REVENUE DOLLAR IN 1989



increase in the capital tax, as well as an increase in taxable gross revenue, used to determine the tax applied as real estate tax to some Hydro-Québec system installations.

INTEREST EXPENSES RELATED TO FINANCIAL MARKETS

- The interest expense that appears in the Consolidated Statement of Operations is the total interest cost less the portion capitalized to Construction in progress.
- At December 31, 1989, the total interest cost was $2,558 million, a rise from the previous year mainly associated with financing construction of new power-system installations required to meet future demand.
- Interest expense, at $2,165 million as of December 31, increased 5.6% compared with 1988. This growth is mainly attributable to the fluctuation in interest rates on floating-rate debt.
- The commissioning of new facilities, including two Manic 5 PA generating units, also contributed to the increase in interest expense. It should be noted that, once facilities are commissioned, their related interest is no longer capitalized but is charged to operations.

EXCHANGE LOSS DECREASES

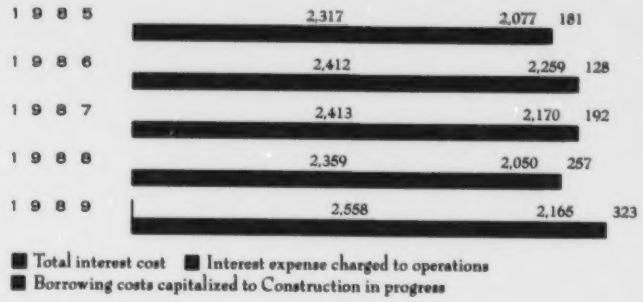
- Exchange loss fell to $70 million at December 31, 1989, 71.8% below 1988. A stronger Canadian dollar, especially in relation to European currencies, and strategic decisions taken by the utility to minimize exposure to exchange risk contributed to the reduction.
- The Canadian dollar's fluctuation vis-à-vis the United States dollar had little impact on exchange loss, however, as 91% of the debt in United States dollars is hedged by continuous future revenue streams in that currency, mainly from export sales. This hedge allows the exchange gain or loss resulting from currency conversions to be deferred to the maturity of such debt.

FINANCING REQUIREMENTS RISE

- Additional outside financing is required for the many investments needed to improve system reliability and to meet future demand.
- At year-end, total debt reached $23.0 billion, $1.4 billion higher than in 1988. The gross volume of the year's issues was $2,948 million; excluding redemption of $1,219 million of long-term debt, these issues added $1,729 million

MAIN INTEREST COMPONENTS

(millions of dollars)

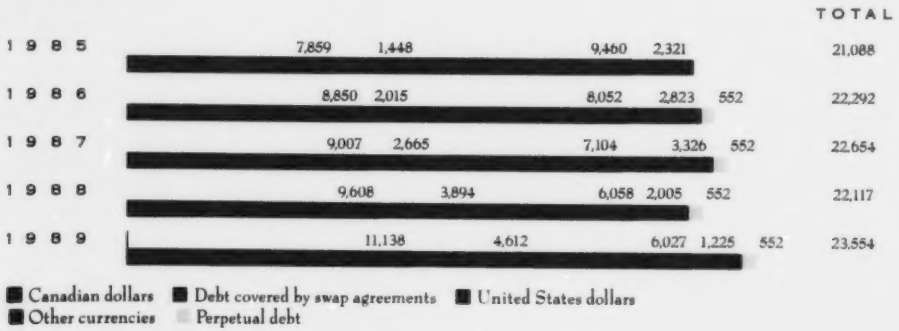


to existing borrowings. The strengthening of the Canadian dollar in relation to other currencies reduced foreign-currency debt by $297 million. It should be noted that the utility renegotiated $187 million in existing borrowings in 1989, compared with $174 million in 1988. The average maturity of 1989 borrowings was 23.4 years.

- In 1989, Hydro-Québec continued to pursue the goal of increasing the proportion of its debt in Canadian dollars, thus reducing the volatility of debt servicing. At December 31, 1989, 68% of total debt was denominated in Canadian dollars, including swaps, compared with 63% in 1988.
- The larger proportion of the debt in Canadian dollars is partially due to the strengthening of the Canadian dollar in relation to foreign currencies. Moreover, Hydro-Québec swapped foreign-currency borrowings which existed at December 31, 1988, for a total of $372 million in Canadian dollar commitments. The purpose of these transactions was to guard against exchange risk. Including swaps, 77% of 1989 new borrowings were in Canadian dollars.
- Financing activities in 1989 brought floating-rate debt to 12.4% of total debt plus perpetual debt. This meets the goal which Hydro-Québec had set itself in its 1989 strategic financing plan.

COMPOSITION OF TOTAL DEBT, AND PERPETUAL DEBT

(millions of dollars)



INVESTMENT IN FIXED ASSETS

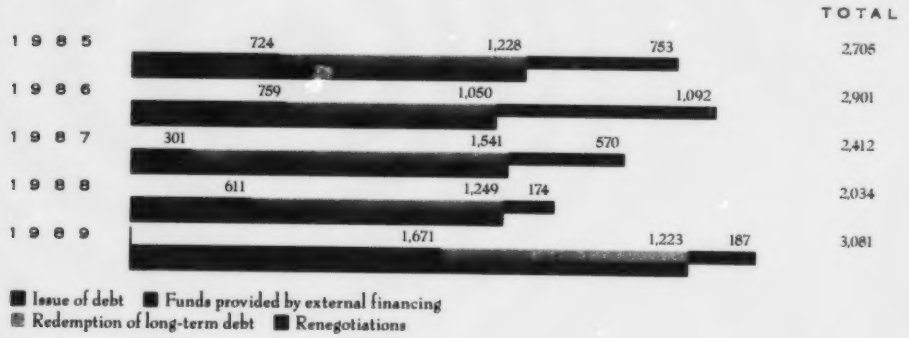
- Investment in fixed assets was up 18.6%, to $2,412 million at year-end, compared with $2,033 million in 1988. Spending on the Radisson-Nicolet-des Cantons transmission line and related substations and other structures totalled $443 million. This transmission line will allow the utility to meet delivery requirements under the firm-energy contract with the New England Power Pool (NEPOOL), starting in 1990.
- In order to meet the growing demand for more power and energy, Hydro-Québec decided to commission several projects earlier than scheduled. Some $177 million was spent on construction of La Grande 2A generating station, commissioning of which is now planned for 1991-1992. A total of $245 million was spent on preliminary construction for La Grande 1, Laforge 1 and Brisay generating stations, as part of Phase II of the La Grande complex.

Financial Criteria: Basic Goals Met

- Furthermore, $150 million was spent on construction of Manic 5 PA, which will be completed shortly, adding 1,064 megawatts to the installed capacity of Hydro-Québec's generating facilities.
- To improve its power system, the utility spent $494 million on distribution lines and substations. Of this amount, $147 million went to upgrading activities and the construction program, while $122 million went to the customer-supply program.
- In 1989, the utility felt the effects of low runoff, as well as the consequences of stepped-up investment and greater financing requirements.
- The main financial ratios declined in comparison with 1988, a direct result of the decline in net income, the growth of the debt and related interest expense, and increased investment.
- Nevertheless, the minimum criteria set by the utility were respected. The interest coverage ratio was 1.12 at year-end, above the minimum acceptable level of 1.0. Similarly, the capitalization ratio (25.9% at the end of 1989) exceeded the minimum goal of 25%. Under the *Hydro-Québec Act*, this entitled the Québec government as sole shareholder to declare dividends of $238 million for the 1989 financial year. However, the government decided to declare only $182 million, to allow the utility a larger margin of manoeuvre for the investment it will have to make in forthcoming years.
- The self-financing ratio went from 34.0% to 30.0%. As for return on equity and profit margin, their respective ratios were 7.0% and 10.2% as of December 31, 1989, compared with 8.0% and 11.7% in 1988.

Breakdown of Financing

(millions of dollars)



Financial Position of Retirement Fund

- The net assets of the Hydro-Québec Retirement Fund rose from $2,689 million at the end of 1988 to $3,024 million at the end of 1989, an increase of $335 million. This year again, most of the increase went to the stock portfolio to further diversify the fund's assets. At market value, stocks now represent nearly 40% of the fund, compared with approximately 25% at the beginning of the year. The proportion of stocks in the fund portfolio is now comparable to the average for Canadian pension plans.

- The rate of return, calculated from the book value of the Retirement Fund portfolio, reached 10.7% for 1989, compared with 8.8% for 1988. The method used for calculating this return does not take account of capital gains or losses until they are realized, and consequently does not reflect appreciation of the market value of the stock portfolio.
- In 1989, the fund paid out $87 million in pension benefits, 8.8% more than in the preceding year. There were 5,842 pensioners at year-end, compared with 5,627 at the end of 1988.
- An actuarial valuation conducted in 1989 for purposes of financing the Retirement Fund showed a net surplus of $190 million for the overall plan at December 31, 1988.

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MANAGEMENT REPORT

Hydro-Québec's consolidated financial statements and all additional information contained in the Annual Report are the responsibility of management and were approved by the Board of Directors. Management's responsibility includes the selection of appropriate accounting practices in accordance with generally accepted accounting principles, and the preparation of reasonable estimates. Financial data contained elsewhere in the Annual Report is consistent with the financial statements.

Management, in keeping with its responsibilities, maintains an internal control system, designed among other things to provide reasonable assurance that Hydro-Québec's assets are safeguarded and that the financial records form an appropriate basis for the preparation of reliable financial statements.

Every year, the Board of Directors appoints an Audit Committee. This committee is responsible for ensuring that the financial statements present fairly Hydro-Québec's financial position, changes in its financial position, and the results of its operations. The committee also studies reports on the utility's accounting methods and policies, and its internal control systems.

In the opinion of management, these financial statements incorporate, within reasonable limits, all important elements and data available at January 31, 1990.

Richard Drouin, QC
Chairman of the Board
and Chief Executive Officer

Claude Boivin
President
and Chief Operating Officer

AUDITORS' REPORT

To the Gouvernement du Québec,

We have examined the consolidated balance sheet of Hydro-Québec as at December 31, 1989, and the consolidated statements of operations, retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of Hydro-Québec as at December 31, 1989, and the results of its operations and the changes in its financial position for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Charette, Fortier, Hawey Touche Ross

Charette, Fortier, Hawey
Touche Ross
Chartered Accountants

Samson Bélair

Samson Bélair
Chartered Accountants

Montréal, Canada
January 31, 1990

CONSOLIDATED STATEMENT OF OPERATIONS

(in millions of dollars)	For the year ended December 31 1989	1988
Revenue		
Sales of electricity (Note 2)	$5,503	$5,223
Other operating revenue	56	55
	5,559	5,278
Expenditure		
Operations	1,597	1,391
Electricity purchased	253	136
Depreciation of fixed assets	585	538
Taxes (Note 3)	324	295
	2,759	2,360
Income before interest and exchange loss	2,800	2,918
Interest (Note 4)	2,165	2,050
Exchange loss	70	249
	2,235	2,299
Net income	$ 565	$ 619

CONSOLIDATED BALANCE SHEET

ASSETS *(in millions of dollars)*	As at December 31 1989	1988
Fixed assets		
Property and plant (Note 5)		
In service	$31,415	$29,990
Less accumulated depreciation	4,898	4,402
	26,517	25,588
Construction in progress	4,293	3,402
	30,810	28,990
Current assets		
Cash and temporary investments	571	145
Accounts receivable	1,251	1,051
Materials, fuel and supplies	289	242
	2,111	1,438
Other assets		
Investments (Note 6)	153	127
Deferred expenses (Note 7)	878	1,207
	1,031	1,334
	$33,952	$31,762

Montréal, Canada
February 8, 1990

Jeannine Guillevin Wood
Chairperson of the Audit Committee

Richard Drouin, QC
Chairman of the Board and Chief Executive Officer

LIABILITIES AND SHAREHOLDER'S EQUITY *(in millions of dollars)*	As at December 31 1989	1988
Long-term debt (Note 8)	$21,957	$20,576
Current liabilities		
Accounts payable	1,090	723
Dividends payable	182	300
Notes payable	18	16
Accrued interest	865	756
Long-term debt payable within one year (Note 8)	1,045	989
	3,200	2,784
Other liability		
Decommissioning of the nuclear generating station (Note 9)	10	–
Perpetual debt (Note 10)	552	552
Shareholder's equity		
Share capital		
Authorized 50,000,000 shares, par value of $100 each		
Issued and fully paid 43,741,090 shares	4,374	4,374
Retained earnings	3,859	3,476
	8,233	7,850
	$33,952	$31,762

CONSOLIDATED STATEMENT OF RETAINED EARNINGS

(in millions of dollars)	For the year ended December 31 1989	1988
Balance at beginning of year	$3,476	$3,157
Net income	565	619
	4,041	3,776
Dividends (Note 11)	182	300
Balance at end of year	$3,859	$3,476

CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION

(in millions of dollars)	For the year ended December 31 1989	1988
Funds provided by operations		
Net income	$ 565	$ 619
Depreciation of fixed assets	585	538
Amortization of deferred expenses	181	358
Difference between pension expense and contributions	(66)	(77)
Other	24	3
	1,289	1,441
Changes in working capital (Note 12)	(313)	355
Dividends	(182)	(300)
	794	1,496
Funds provided by external financing		
Issue of long-term debt	2,894	1,860
Redemption of long-term debt	(1,223)	(1,249)
	1,671	611
Funds available for investment	$2,465	$2,107
Investment		
Fixed assets	$2,412	$2,033
Grants under sales programs	32	62
Other	21	12
	$2,465	$2,107

NOTE 1

Significant accounting policies

a) Hydro-Québec mandate and rates

Under the provisions of its Act, Hydro-Québec has the mandate to supply power and to pursue endeavors in energy-related research and promotion, energy conversion and conservation, and any field connected with or related to power or energy. The rates and conditions under which power is supplied must be consistent with sound financial administration. The *Hydro-Québec Act* stipulates that the rates must be maintained at a level sufficient to defray at least all operating expenditures, interest on debt, and depreciation of fixed assets over a maximum period of 50 years. The rates are established by Hydro-Québec and are subject to the approval of the Gouvernement du Québec.

b) Consolidation

The consolidated financial statements include the financial statements of Hydro-Québec and its subsidiary companies.

c) Sales of electricity

Revenue from sales of electricity is recorded on the basis of cyclical billings. It is also accrued in respect of electricity delivered but as yet unbilled.

d) Property and plant

Property and plant include generating, transmission and distribution facilities and administration and service buildings, as well as construction, operating and research equipment. They are carried at cost, which comprises material, direct and indirect labor, and an appropriate proportion of the administration overhead, and of the engineering and management expenses capitalized during construction. The cost also includes borrowing costs capitalized to Construction in progress, as explained under (f) hereinafter.

Upon disposal, the asset unit and dismantlement costs, net of accumulated depreciation and salvage value, are charged to a separate account and amortized over 10 years according to the sinking fund method of depreciation, based on an interest rate of 3%. However, when the disposed asset units are replaced, the dismantlement cost, less the salvage value, is added to the cost of the new units and then depreciated according to the method and depreciable life appropriate to the new asset.

The costs of generating facilities, up to an amount equal to the accumulated cost at date of transfer, are transferred to Property and plant in service in instalments equal to the number of generating units completed and in service as a proportion of the total number scheduled for the new facility, on the basis of the present value of the total estimated cost. The costs of transmission, distribution and other facilities are transferred to Property and plant in service when these facilities are completed and in commercial operation.

NOTE 1

Significant accounting policies (continued)

e) Depreciation

Hydro-Québec uses the sinking fund method of providing for depreciation of its fixed assets (other than construction, operating and research equipment), based on an interest rate of 3% and the following expected service lives:

Hydraulic powerhouses, dams, reservoirs, transmission towers (steel) and conductors, and administration and service buildings	50 years
Hydraulic turbines and generators and distribution conductors	40 years
Nuclear generating station and its turbine, generator and reactor	30 years
Distribution poles	25 years

Construction, operating and research equipment is depreciated over its expected service life according to the straight-line method.

f) Borrowing costs capitalized to Construction in progress

Borrowing costs are added to the cost of construction in progress at a rate equivalent to the weighted average of the effective interest rates on Hydro-Québec's debt securities issued to finance such construction, and include the exchange loss on the principal amount of these debt securities. This rate was 10.30% in 1989 and 11.80% in 1988.

g) Research and development

Preliminary engineering, investigation and survey costs incurred on projects before authorization for their construction is obtained are charged to operating expenditure. The cost of research and development related to alternative energy sources, or not related to a specific project, is also charged to operations.

h) Materials, fuel and supplies

Inventories of materials, fuel and supplies are valued on an average cost basis.

i) Investments

All investments are shown at cost. The cost of temporary investments approximates market value.

j) Foreign currency translation

Revenue and expenditure resulting from transactions made in foreign currencies are translated into the Canadian dollar equivalent at exchange rates in effect at the transaction date. Monetary assets and liabilities are translated into Canadian dollars at exchange rates in effect at the balance sheet date, and non-monetary items are translated into Canadian dollars at exchange rates in effect at the transaction date. However, monetary items covered by monetary agreements against exchange risks are translated into Canadian dollars at the exchange rates established under the conditions of the relevant agreement.

Significant accounting policies (continued)

- The exchange gains or losses resulting from these translations are included in the Consolidated Statement of Operations; those pertaining to the capital of long-term debt are deferred and amortized on a straight-line basis over the remaining life of the debt securities, except when they relate to debt securities hedged by future revenue streams in United States dollars, in which case they are deferred until the date of repayment of such debt.

k) Grants under sales programs

In the framework of its plan to expand the Québec market, Hydro-Québec has implemented assistance programs for the marketing of electricity. The grants for these programs are deferred and amortized on a straight-line basis over the five years after the year in which they are made.

l) Debt-security discount and expenses

Debt-security discount and expenses are deferred and amortized on a straight-line basis over the life of the debt to which they apply.

m) Sinking funds

The sinking funds are formed through the purchase of Hydro-Québec debentures, or bonds issued or guaranteed by the Québec and Canadian governments. These funds are deducted from long-term debt. Government issued or guaranteed bonds are carried at cost; Hydro-Québec debentures are carried at par, which may not be indicative of cost or current market value. The profit or loss resulting from the redemption of these debentures and bonds is included with Interest (see Note 4). The unamortized discount and expenses are written off when these debt securities are cancelled.

n) Dividends

The dividends declared by the Gouvernement du Québec (see Note 11) are deducted from the retained earnings of the year for which they were declared.

o) Decommissioning of the nuclear generating station

The estimated future costs of decommissioning the Gentilly 2 nuclear generating station are charged to operations, and comprise the total of the following:

- The present value of the total dismantlement cost, allocated on a straight-line basis over the remaining life of the generating station,
- The present value of the expected cost for final disposal of the irradiated fuel, allocated proportionately to the consumption of the fuel,
- Interest calculated on the amounts charged in preceding years, at the rate used to discount the amounts hereinabove.

- The obligation related to the decommissioning is reflected under Other liability.
- These costs are revised periodically in accordance with the various assumptions and estimates underlying the calculations, and with any technological advances that may arise in the decommissioning of nuclear generating stations.

NOTE 1

Significant accounting policies (continued)

p) Pension expense

The costs of the retirement plan are determined periodically by independent actuaries. Pension expense is charged to operations and comprises the total of the following:

- The cost of pension benefits provided in exchange for employees' services rendered during the year, as calculated using the projected benefit method pro rated on services, and
- Amortization over the employees' expected average remaining service life, according to the level annual contribution method, of (i) adjustments arising from changes in the plan or in assumptions, (ii) experience gains or losses, and (iii) the plan surplus determined upon adoption of the 1986 recommendations of the Canadian Institute of Chartered Accountants.

The cumulative difference between pension expense and contributions made to the retirement fund is reflected in Deferred expenses.

NOTE 2

Sales of electricity

Sales of electricity include $194 million from sales to the United States ($346 million in 1988).

NOTE 3

Taxes

(in millions of dollars)	1989	1988
Capital tax	$157	$142
Tax on gross revenue as municipal real estate tax on certain immovables	141	129
Real estate taxes	26	24
	$324	$295

NOTE 4

Interest

(in millions of dollars)	1989	1988
Interest on debt securities	$2,536	$2,338
Amortization of debt-security discount and expenses	22	21
Net loss on redemption of long-term debt	6	3
	2,564	2,362
Less		
Borrowing costs capitalized to Construction in progress	323	257
Net investment income	76	55
	399	312
	$2,165	$2,050

NOTE 5

Property and plant

(in millions of dollars)	1989			1988		
	Property and plant in service	Accumulated depreciation	Construction in progress	Property and plant in service	Accumulated depreciation	Construction in progress
Generation						
Hydraulic	$14,033	$1,946	$2,007	$13,581	$1,771	$1,730
Nuclear	1,468	192	11	1,457	159	12
Other	387	167	44	380	151	11
	15,888	2,305	2,062	15,418	2,081	1,753
Transmission						
Substations	3,397	455	927	3,152	401	624
Lines	4,246	586	828	4,156	531	537
	7,643	1,041	1,755	7,308	932	1,161
Distribution						
Substations	1,091	193	23	1,100	178	68
Lines	4,291	603	261	3,876	560	267
	5,382	796	284	4,976	738	335
Other						
Administration and service buildings	862	88	39	812	72	36
Equipment	918	501	14	792	430	–
Sundry	722	167	139	684	149	117
	2,502	756	192	2,288	651	153
Total	$31,415	$4,898	$4,293	$29,990	$4,402	$3,402

NOTE 6

Investments

(in millions of dollars)	1989	1988
Churchill Falls (Labrador) Corporation Limited (CFLCo) (see Note 14)		
General Mortgage Bonds, 7½%, due 1990 through 2010 (par value $82 million in 1989 and $83 million in 1988)	$ 74	$ 76
Common shares	34	34
	108	110
Other	45	17
	$153	$127

NOTE 7

Deferred expenses

(in millions of dollars)	1989	1988
Unrealized exchange loss	$120	$ 479
Grants under sales programs	170	226
Debt-security discount and expenses	229	197
Pension expense	291	225
Other	68	80
	$878	$1,207

NOTE 8

Long-term debt

Hydro-Québec's long-term debt is guaranteed by the Province de Québec, except for an amount of $169 million ($177 million in 1988).

Debenture and other long-term debt maturities and sinking fund requirements, translated into Canadian dollars, are shown in the following table:

NOTE 8

Long-term debt (continued)

Years of maturity	1989 (in millions of dollars)	1989 Weighted average interest rate	1988 (in millions of dollars)	1988 Weighted average interest rate
1989	$ –		$ 989	
1990	1,045		1,068	
1991	1,531		1,517	
1992	1,698		1,801	
1993	1,050		863	
1994	1,044		–	
1 - 5 years	6,368	13.08%	6,238	12.31%
6 - 10 years	6,282	10.09%	6,089	10.44%
11 - 15 years	3,138	9.93%	3,046	9.75%
16 - 20 years	2,824	10.74%	3,319	10.67%
21 - 25 years	2,268	10.94%	1,682	11.36%
26 - 30 years	509	10.16%	434	10.25%
31 - 35 years	–	–	–	–
36 - 40 years	1,613	8.50%	757	8.25%
	23,002	10.97%	21,565	10.92%
Less Portion payable within one year	1,045		989	
	$21,957		$20,576	

NOTE 8

Long-term debt (continued)

Repayments to be made in Canadian dollars and in foreign currencies, with their Canadian dollar equivalent, are shown in the following table:	(in millions of units)			1989 Total (in millions of dollars)	1988 Total (in millions of dollars)
	1990 to 1994	1995 to 2029	Total	1990 to 2029	1989 to 2027
Canadian dollars	2,275	8,863	11,138	$11,138	$9,608
At rates established according to conditions of monetary agreement					
United States dollars	1,986	316	2,302	2,983	2,934
Deutsche marks	470	301	771	447	179
Swiss francs	575	100	675	439	195
Yen	25,000	20,450	45,450	412	412
Pounds sterling	–	75	75	174	174
ECUs	–	125	125	157	–
				15,750	13,502
At rates in effect at balance sheet date					
United States dollars	316	4,886	5,202*	6,027	6,058
Deutsche marks	373	385	758	518	700
Swiss francs	21	450	471	354	639
Yen	–	–	–	–	191
Pounds sterling	–	150	150	280	324
ECUs	–	–	–	–	70
Guilders	75	45	120	73	81
				7,252	8,063
				$23,002	$21,565

*A proportion of 91% (80% in 1988) is hedged by future revenue streams in United States dollars.

NOTE 8

Long-term debt (continued)

l Hydro-Québec has two undrawn revolving standby credits for U.S.$400 million and U.S.$750 million which expire in 1993 and 1994, respectively. Any borrowing under these lines of credit will bear interest at a rate based on the London Interbank Offered Rate (LIBOR).

NOTE 9

Decommissioning of the nuclear generating station

With a view to the decommissioning of the Gentilly 2 nuclear generating station, Hydro-Québec has this year begun to constitute a provision for its dismantlement and final disposal of the irradiated fuel. For 1989, this provision amounts to $1 million and $9 million respectively.

NOTE 10

Perpetual debt

Perpetual notes in the amount of U.S.$400 million bear interest at a rate based on the London Interbank Offered Rate (LIBOR) established twice yearly. They are guaranteed by the Province de Québec and are redeemable, at Hydro-Québec's option only, beginning in 1991. These notes are shown in Canadian dollars at the exchange rate in effect at date of issue ($463 million at exchange rate in effect at balance sheet date).

NOTE 11

Restrictions on dividends

Under the *Hydro-Québec Act,* the dividends to be paid by Hydro-Québec are declared once a year by the Gouvernement du Québec, which also determines the terms and conditions of payment. For a given financial year, they cannnot exceed the distributable surplus, which is established as follows: 75% of income before interest and exchange loss and the year's net investment income, less interest on debt securities and amortization of debt-security discount and expenses. This calculation is made on the basis of the consolidated financial statements.

NOTE 11

Restrictions on dividends (continued)

- However, in respect of a given financial year no dividend may be declared in an amount that would have the effect of reducing the rate of capitalization to less than 25% at the end of the year concerned. This rate corresponds to the ratio between shareholder's equity (less dividends declared for the year) and the total of long-term debt, notes payable, perpetual debt and shareholder's equity (less dividends declared for the year).
- The government declares the dividends for a given year within 30 days after the transmission by Hydro-Québec to the government of the financial data relative to the distributable surplus. On expiry of the time prescribed, any distributable surplus or part thereof which has not been subject to a dividend declaration may no longer be distributed to the shareholder as a dividend.
- In accordance with the above, dividends of $238 million could have been declared for the 1989 financial year. However, the Gouvernement du Québec declared dividends of $182 million.

NOTE 12

Changes in working capital

(in millions of dollars)	1989	1988
(Increase) decrease in current assets		
Cash and temporary investments	$(426)	$ 17
Accounts receivable	(200)	36
Materials, fuel and supplies	(47)	(19)
	(673)	34
Increase (decrease) in current liabilities		
Accounts payable	367	129
Dividends payable	(118)	300
Notes payable	2	(78)
Accrued interest	109	(30)
	360	321
	$(313)	$355

NOTE 13

Retirement plan

The Hydro-Québec retirement plan is a contributory, defined benefit pension plan based on final pay, under which benefits payable are guaranteed by Hydro-Québec. At December 31, 1989, 19,073 employees were contributing to the plan. An actuarial valuation was made in 1989 in order to determine the present value of accrued benefits based on employees' expected basic salary until retirement. The retirement fund assets are valued at market-related values.

At December 31, 1989, the date of the most recent valuation, the retirement plan showed a surplus as follows:

	(in millions of dollars)
Retirement fund assets	$3,178
Present value of accrued benefits	(2,573)
Excess special contributions made by Hydro-Québec	(21)
Surplus	**$ 584**

For the year ended December 31, 1989, pension expense amounted to $27 million ($14 million in 1988).

NOTE 14

Commitments and projected capital expenditures

Churchill Falls

On May 12, 1969, Hydro-Québec signed a contract with Churchill Falls (Labrador) Corporation Limited (CFLCo) whereby Hydro-Québec undertook to purchase virtually all the power generated at the Churchill Falls generating station for a period of 40 years from September 1, 1976, except for an amount not to exceed 300,000 kilowatts of such power which may be recaptured by CFLCo. This contract will be automatically renewed for a further period of 25 years upon already agreed terms.

By this contract, Hydro-Québec undertook to make payment for energy whether or not taken, subject to certain limitations and compensations, and to pay CFLCo an amount equal to a portion of the interest charges on the debt incurred by CFLCo to finance the construction of the plant as well as an amount equal to a portion of the losses on foreign exchange incurred to service the debt issued in United States dollars. Hydro-Québec can also be required to make additional advances, against the issue of units of Subordinate Debentures and shares of Common Stock, to service the debt of CFLCo and to cover its expenses if funds are not otherwise available.

Projected capital expenditures

Hydro-Québec plans call for capital expenditures in the amount of $3,480 million for 1990.

NOTE 15

Reclassification

Some of the comparative figures for 1988 were reclassified in order to conform to the presentation adopted in 1989.

CONSOLIDATED RESULTS AND FINANCIAL RATIOS

(in millions of dollars)	1989	1988	1987	1986	1985
Revenue					
Sales of electricity	$5,503	$5,223	$5,040	$4,673	$4,423
Other operating revenue	56	55	28	39	46
	5,559	5,278	5,068	4,712	4,469
Expenditure					
Operations	1,597	1,391	1,219	1,107	1,140
Electricity purchased	253	136	110	118	122
Depreciation of fixed assets	585	538	500	464	419
Taxes	324	295	289	272	246
	2,759	2,360	2,118	1,961	1,927
Income before interest and exchange loss	2,800	2,918	2,950	2,751	2,542
Interest					
Interest on debt securities	2,536	2,338	2,392	2,388	2,294
Amortization of debt-security discount and expenses	22	21	21	24	23
Net loss (net profit) on redemption of long-term debt	6	3	5	5	(10)
Borrowing costs capitalized to Construction in progress	(323)	(257)	(192)	(128)	(181)
Net investment income	(76)	(55)	(56)	(30)	(49)
	2,165	2,050	2,170	2,259	2,077
Exchange loss	70	249	272	189	256
	2,235	2,299	2,442	2,448	2,333
Net income	$ 565	$ 619	$ 508	$ 303	$ 209
Declared dividends	$ 182	$ 300	–	–	–
Contribution (taxes and dividends) to provincial and municipal government revenue	$ 506	$ 595	$ 289	$ 272	$ 246
Financial ratios					
Interest coverage	1.12	1.26	1.25	1.15	1.12
Capitalization *(%)*	25.9	26.2	24.9	24.0	24.1
Self-financing *(%)*	30.0	34.0	41.0	40.6	35.7
Return on equity *(%)*	7.0	8.0	7.0	4.4	3.2
Profit margin *(%)*	10.2	11.7	10.0	6.4	4.7

$$\text{Interest coverage} = \frac{\text{Income before interest and exchange loss + Net investment income}}{\text{Gross interest charges}}$$

$$\text{Capitalization} = \frac{\text{Shareholder's equity}}{\text{Shareholder's equity + Long-term debt + Perpetual debt + Notes payable + Long-term debt payable within one year}}$$

$$\text{Self-financing} = \frac{\text{Total financial resources provided by operations – Declared dividends}}{\text{Investments + Redemption of long-term debt}}$$

$$\text{Return on equity} = \frac{\text{Net income}}{\text{Shareholder's equity (year's average)}}$$

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Revenue}}$$

OPERATING STATISTICS

(in millions of kilowatthours)	1989	1988	1987	1986	1985	Average annual increase (in %) 1989/1984
Electricity sales						
Firm in Québec						
Residential and farm	47,607	43,697	40,412	40,548	38,427	5.7
General and institutional	28,750	26,580	23,941	22,235	20,811	7.8
Industrial	46,503	44,821	41,698	36,512	34,351	8.2
Other	4,688	4,689	4,362	4,241	4,052	4.3
	127,548	119,787	110,413	103,536	97,641	7.0
Surplus in Québec						
General	24	1,118	1,298	1,395	1,361	(51.9)
Industrial	274	7,547	11,189	11,082	9,505	(47.6)
Neighboring systems	8	58	1,253	1,176	1,239	(67.0)
	306	8,723	13,740	13,653	12,105	(51.1)
Deliveries outside Québec						
Firm electricity	8,830	9,164	8,313	6,980	6,898	7.0
Surplus electricity	886	7,720	20,456	19,954	17,295	(44.3)
	9,716	16,884	28,769	26,934	24,193	(15.7)
Total sales	137,570	145,394	152,922	144,123	133,939	2.1
Revenue from electricity sales *(in millions of dollars)*						
Firm in Québec						
Residential and farm	$ 2,215	$ 1,965	$ 1,768	$ 1,683	$ 1,542	9.3
General and institutional	1,414	1,282	1,127	1,026	938	10.0
Industrial	1,356	1,205	1,106	978	904	10.1
Other	207	198	182	170	157	6.9
	5,192	4,650	4,183	3,857	3,541	9.6
Surplus in Québec						
General	–	15	15	20	24	–
Industrial	3	86	113	135	167	(52.1)
Neighboring systems	–	1	16	12	18	–
	3	102	144	167	209	(55.1)
Deliveries outside Québec						
Firm electricity	279	276	256	242	218	9.6
Surplus electricity	29	195	457	407	455	(42.7)
	308	471	713	649	673	(13.8)
Total revenue	$ 5,503	$ 5,223	$ 5,040	$ 4,673	$ 4,423	6.1
Number of customer accounts at December 31						
Residential and farm	2,802,418	2,753,717	2,676,810	2,599,403	2,527,643	2.8
General and institutional	263,380	258,020	250,366	242,559	235,291	2.7
Industrial	13,210	13,368	13,088	13,045	13,077	0.4
Other	7,117	7,160	7,168	7,415	7,579	(1.8)
Total	3,086,125	3,032,265	2,947,432	2,862,422	2,783,590	2.7
Changes in number of employees*						
Permanent at December 31	19,437	19,252	18,933	18,470	18,208	0.9
Women	3,853	3,751	3,621	3,504	3,450	2.2
Temporary (year's average)	4,425	3,521	2,989	2,749	3,163	15.1

* These figures exclude employees on loan to subsidiaries.

UNIT REVENUE, UNIT EXPENDITURE, AND OTHER RATIOS

	1989	1988	1987	1986	1985
Unit revenue – electricity sales					
(in cents per kilowatthour)					
Firm in Québec	4.07	3.88	3.79	3.73	3.63
Residential and farm	4.65	4.50	4.38	4.15	4.01
General and institutional	4.92	4.82	4.71	4.61	4.51
Industrial	2.92	2.69	2.65	2.68	2.63
Other	4.42	4.22	4.16	4.01	3.88
Surplus in Québec	1.09	1.17	1.05	1.23	1.73
Québec sales	4.06	3.70	3.48	3.43	3.42
Firm outside Québec	3.16	3.01	3.07	3.47	3.16
Surplus outside Québec	3.20	2.52	2.24	2.04	2.63
Export sales	3.17	2.79	2.48	2.41	2.78
Unit revenue – total sales	4.00	3.59	3.30	3.24	3.30
Unit expenditure					
(in cents per kilowatthour)					
Expenditure					
Operations	1.16	0.96	0.79	0.77	0.86
Electricity purchased	0.18	0.09	0.07	0.06	0.09
Depreciation of fixed assets	0.43	0.37	0.33	0.32	0.31
Taxes	0.24	0.20	0.19	0.19	0.19
	2.01	1.62	1.38	1.36	1.44
Interest and exchange loss					
Interest	1.57	1.41	1.42	1.57	1.55
Exchange loss	0.05	0.17	0.18	0.13	0.19
	1.62	1.58	1.60	1.70	1.74
Total unit expenditure	3.63	3.20	2.98	3.06	3.18
Total assets at December 31					
(in dollars per customer account)	11,002	10,475	10,741	10,686	10,484
Long-term debt at December 31					
(in dollars per customer account)	7,115	6,786	7,192	7,109	7,229
Annual investment					
(in dollars per customer account)	799	695	572	547	580
Average annual consumption – residential and farm sector					
(in kilowatthours per customer account)	17,137	16,093	15,318	15,817	15,453
Average rate increase, May 1st – all categories *(in %)*	4.3	3.9	4.6	5.4	2.5
Representation of women*– permanent employees at December 31 *(in %)*	19.8	19.5	19.1	19.0	18.9

* These figures exclude employees on loan to subsidiaries.

ENERGY AND POWER REQUIREMENTS OF SYSTEM

Energy requirements

(in millions of kilowatthours)	1989	1988	1987	1986	1985	Average annual increase (in %) 1989/1984
Total requirements						
Generated (gross)	125,109	129,043	137,730	128,078	115,538	4.5
Received						
Purchased	28,389	31,754	30,422	30,892	32,111	(4.8)
Received as per agreement	3,505	2,948	2,118	1,940	2,368	9.7
	31,894	34,702	32,540	32,832	34,479	(3.7)
Total requirements	**157,003**	163,745	170,270	160,910	150,017	2.5
Québec requirements						
Firm electricity	127,548	119,787	110,413	103,536	97,641	7.0
Deliveries as per agreement	5,166	4,145	3,085	3,118	3,470	9.9
Total priority consumption	**132,714**	123,932	113,498	106,654	101,111	7.1
Generating-station service	688	592	500	514	685*	1.1
Losses and other	12,968	12,098	11,122	10,655	11,928*	3.0
Total priority requirements	**146,370**	136,622	125,120	117,823	113,724	6.7
Surplus electricity	306	8,723	13,740	13,653	12,105	(80.1)
Generating-station service	1	42	59	63	–*	–
Losses and other	18	457	798	773	–*	–
Total Québec requirements	**146,695**	145,844	139,717	132,312	125,829	4.8
Deliveries outside Québec						
Firm electricity	8,830	9,164	8,313	6,980	6,898	7.0
Surplus electricity	886	7,720	20,456	19,954	17,295	(44.3)
Deliveries as per agreement	180	41	(12)	29	(5)	–
Generating-station service	36	80	124	127	–*	–
Losses and other	376	896	1,672	1,508	–*	–
Total deliveries outside Québec	**10,308**	17,901	30,553	28,598	24,188	(14.7)
Total requirements	**157,003**	163,745	170,270	160,910	150,017	2.5

* Until 1985, losses and generating-station service were assigned exclusively to priority requirements.

Power requirements for the winter beginning in December*

(in thousands of kilowatts)	1989	1988	1987	1986	1985	Average annual increase (in %) 1989/1984
Total requirements	**27,630**	27,250	28,246	26,004	25,745	1.6
Priority requirements	**27,044**	26,466	26,005	23,219	22,895	3.8

* The power requirements of 1989 correspond to data available at January 31, 1990. These requirements reflect application of interruptible power clauses in certain contracts.

Total installed capacity*

(in thousands of kilowatts)	1989	1988	1987	1986	1985	Average annual increase (in %) 1989/1984
Installed capacity	**25,126**	24,590	24,533	24,475	23,510	1.4

* Hydro-Québec also has access to most of the generation of the Churchill Falls power plant, which has a nominal capacity of 5,428 megawatts.

AUDITORS' REPORT

To the Administrators,

We have examined the statement of net assets of the Hydro-Québec Retirement Fund as at December 31, 1989, and the statement of changes in net assets for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the net assets of the Hydro-Québec Retirement Fund as at December 31, 1989, and the changes in its net assets for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Charette, Fortier, Hawey
Touche Ross

Charette, Fortier, Hawey
Touche Ross
Chartered Accountants

Samson Bélair

Samson Bélair

Chartered Accountants

Montréal, Canada
January 31, 1990

STATEMENT OF NET ASSETS

(in millions of dollars)	As at December 31 1989	1988
Investments (Note 2)		
Bonds or debentures (Note 3)	$1,392	$1,387
Shares	1,081	649
Deep-discount investments guaranteed by the Government of Canada or by the provinces	230	231
Mortgage loans	69	51
Cash and short-term investments	223	354
	2,995	2,672
Dividends and interest receivable	40	45
Accounts receivable	10	6
	3,045	2,723
Less		
Excess special contributions made by Hydro-Québec (Note 4)	21	34
	$3,024	$2,689

On behalf of Hydro-Québec,

Jeannine Guillevin Wood
Chairperson of the Audit Committee

Richard Drouin, QC
Chairman of the Board and Chief Executive Officer

Montréal, Canada
February 8, 1990

STATEMENT OF CHANGES IN NET ASSETS

(in millions of dollars)	For the year ended December 31 1989	1988
Balance at beginning of year	$2,689	$2,425
Increase		
Revenue from investments	293	219
Current contributions		
Employees	39	38
Hydro-Québec	77	74
	116	112
Hydro-Québec's contribution (Note 4)	16	16
	425	347
	3,114	2,772
Decrease		
Excess special contributions made by Hydro-Québec (Note 4)	3	3
Benefits paid	87	80
	90	83
Balance at end of year	$3,024	$2,689

NOTES TO FINANCIAL STATEMENTS

NOTE 1

DECEMBER 31, 1989

Significant accounting policies

These statements show only the net assets of the Hydro-Québec Retirement Fund, and do not purport to show the adequacy of the Fund to meet the obligations of the Hydro-Québec Retirement Plan, which are guaranteed by Hydro-Québec.

a) Investments

Bonds and debentures

Bonds and debentures are shown at amortized cost. Gains or losses on sales of bonds and debentures are calculated on an average amortized cost basis.

Shares

Shares are shown at cost. Revenue is recorded at the ex-dividend date. Gains or losses on sales of shares are calculated on an average cost basis.

Deep-discount investments

Deep-discount investments are shown at amortized cost.

Mortgage loans

Mortgage loans are shown at their principal balance outstanding.

Short-term investments

Short-term investments are shown at cost.

b) Recording of transactions

Revenue from investments, contributions and benefits are accounted for on an accrual basis.

c) Foreign currency translation

Revenue resulting from transactions made in foreign currencies is translated into the Canadian dollar equivalent at exchange rates in effect at the transaction date. Cash, short-term investments, dividends and interest receivable are translated into Canadian dollars at exchange rates in effect at the balance sheet date. Shares are translated into Canadian dollars at exchange rates in effect at the transaction date.

The exchange gains or losses resulting from these translations are reflected in revenue from investments.

NOTE 2

Market value of investments

(in millions of dollars)	1989	1988
Bonds or debentures (par value of $1,395 million in 1989 and $1,390 million in 1988)	$1,399	$1,392
Shares		
Canadian	993	597
Foreign	220	75
Deep-discount investments	263	244
Mortgage loans	69	51
Cash and short-term investments	223	354
	$3,167	$2,713

NOTE 3

Bonds or debentures

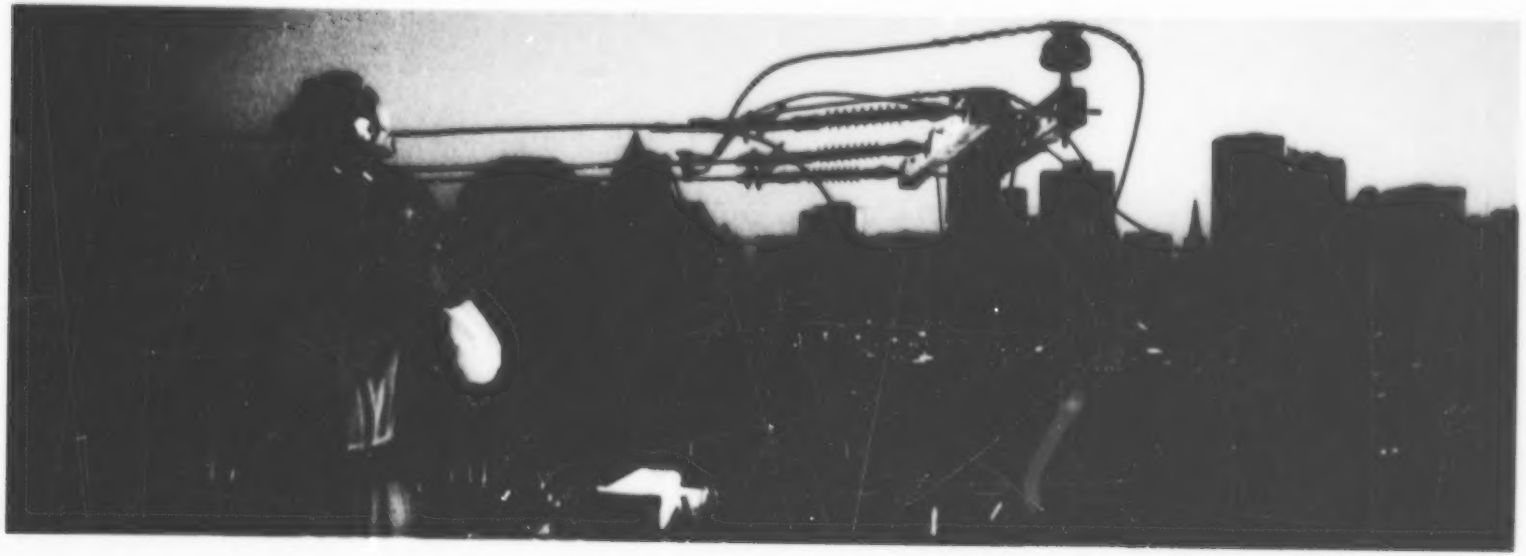
(in millions of dollars)	1989	1988
Issued or guaranteed by the Government of Canada	$ 701	$ 465
Issued or guaranteed by the Province de Québec	72	192
Of Hydro-Québec guaranteed by the Province de Québec	146	283
Issued or guaranteed by other provinces	137	86
Of municipalities, school commissions, Cegeps, hospitals and universities	202	212
Of corporations	134	149
	$1,392	$1,387

NOTE 4

Actuarial valuation

An independent actuarial valuation made in 1989 for purposes of financing the Retirement Fund shows a net surplus for the overall plan at December 31, 1988. The fund of the basic plan of the Retirement Fund shows a surplus of $298 million, while the fund of the supplementary plans shows a deficit of $108 million. In conformity with the bylaws governing Hydro-Québec's retirement plan, Hydro-Québec must amortize this deficit over a maximum period of 15 years.

Previous actuarial valuations revealed excess special contributions paid by Hydro-Québec in the financial years 1982 through 1984. These contributions and related interest are accounted for by decreasing the assets of the Retirement Fund in the item Excess special contributions made by Hydro-Québec.



Power-system reliability is dependent on human expertise.

Richard Drouin, QC
Chairman of the Board
and Chief Executive Officer

Claude Boivin
President
and Chief Operating Officer

MEMBERS

Marcel Aubut
Senior Partner in the law firm of Aubut, Chabot, Québec City

Michel Bélanger
Chairman of the Board of the National Bank of Canada

Mario Bertrand*
President of M Stores (Steinberg)

Jean A. D'Argensio
Partner in the firm of D'Argensio & Associés, auditors

Robert Demers
Vice Chairman of the Board of McNeil Mantha Inc.

Jean-Louis Dulac
President and Chief Executive Officer of M & M Nord Ouest Inc.

Jean-André Élie
Financial Adviser with Burns Fry Ltd.

François Geoffrion
Deputy Minister, Ministry of Energy and Resources, Gouvernement du Québec

Jeannine Guillevin Wood
President and Chief Executive Officer of Guillevin International Inc.

Georges Laberge
President of Placements Georges Laberge Inc.

Claire Léger
Vice Chairman of the Board of St-Hubert Bar-B-Q Ltd.

Pierre H. Lessard
President and Chief Executive Officer of Æterna-Life Insurance Company

Denise Martin**
Vice President, Data Processing of Les Épiciers Unis Métro-Richelieu Inc.

Serge Ménard***
Vice President of Entreprises Ménard Inc.

Michel Plessis-Bélair
Senior Vice President, Finance and Administration, of Power Corporation of Canada and Power Financial Corporation

Charles-Albert Poissant
Chairman of the Board and Chief Executive Officer of Donohue Inc.

Gérald Tremblay****
President and Chief Executive Officer of la Société de développement industriel du Québec

EXECUTIVE COMMITTEE OF THE BOARD OF DIRECTORS

Richard Drouin, *Chairman*
Marcel Aubut
Claude Boivin
Jean-André Élie
Claire Léger
Michel Plessis-Bélair
Gérald Tremblay******

**Took up duties on December 20, 1980.*
***Resigned on June 27, 1980.*
****Took up duties on June 28, 1980.*
*****Resigned on August 10, 1980.*

SENIOR OFFICERS

RICHARD DROUIN, QC
Chairman of the Board and
Chief Executive Officer

CLAUDE BOIVIN
President and
Chief Operating Officer

	External Markets	Finance and Administration	Technology, International Affairs and IREQ	Corporate Audit
LOUIS BOLULLO *Executive Director*	JACQUES GUEVREMONT *Executive Vice President*	JOHN A. HANNA *Executive Vice President*	MAURICE HUPPÉ *Executive Vice President*	ROLLANDE MONTSION *General Auditor*

	Corporate Planning	Corporate Secretariat	Human Resources Development	Information and Public Affairs
	ANDRÉ DELISLE *Vice President*	JEAN BERNIER *General Secretary*	JACQUES NADEAU *Vice President*	MARCEL COUTURE *Vice President*

	Installations	Québec Markets	Regional Operations	Generation, Transmission and Distribution	Personnel
VACANT *Executive Director*	BENOÎT MICHEL *Executive Vice President*	JACQUES FINET *Executive Vice President*	GILLES BÉLIVEAU *Executive Vice President*	JEAN-CLAUDE ROY *Vice President*	MICHEL BLAIS *Vice President*

GENERAL MANAGEMENT

(at December 31, 1980)

EXTERNAL MARKETS

Jacques Guevremont
Executive Vice President

Claude Dubé
Corporate Vice President

Export Sales and Marketing
Pierre Bolduc
Vice President

Planning and Administration
Jean-Claude Richard
Vice President

FINANCE AND ADMINISTRATION

John A. Hanna
Executive Vice President

Finance
André Dubuc
Vice President and Treasurer

Budget, Financial Planning
and Management Control
Colin Longpré
Vice President

Accounting and Internal Control
Carole Lamoureux
Vice President

Directives and Systems
André Richard
Interim Director

Computer Services
Michel Taillon
Vice President

Procurement
Yves Gosselin
Director

Administrative Services
Gilles Ducharme
Director

INSTALLATIONS

Benoît Michel
Executive Vice President

André Laporte
Director

Administration and Control
Philippe Biron
Vice President

Environment
Daniel Dubeau
Vice President

Generation Facilities and Buildings
Yves Filion
Vice President

System Planning
André Mercier
Vice President

Transmission Facilities
Claude de Grandmont
Vice President

QUÉBEC MARKETS

Jacques Finet
Executive Vice President

Customer Services
Pierre Fiset
Vice President

Industrial Markets
Michel Labonté
Vice President

Market Planning and Rates Structure
Gilles Roy
Director

REGIONAL OPERATIONS

Gilles Béliveau
Executive Vice President

Gérard Fournier
Corporate Vice President

Management of Customer Complaints
Raymond Godbout
Vice President

Technical Activities
Gérald Soulières
Director

La Grande Rivière Region
Pierre Nadeau
Vice President

Laurentides Region
Jacques Grenier
Vice President

Maisonneuve Region
André Lavoie
Vice President

Manicouagan Region
Jacques Régis
Vice President

Matapédia Region
Jean-Pierre Brassard
Vice President

Mauricie Region
Joseph McNally
Vice President

Montmorency Region
Jean-Marie Gonthier
Regional Vice President and
Vice President, Finance
and Administration

Richelieu Region
Gaétan Marois
Regional Vice President and
Vice President, Human Resources

Saguenay Region
Denis St-Pierre
Vice President

Saint-Laurent Region
Jean Houde
Regional Vice President and
Vice President, Markets
and Information

Technology, International Affairs and IREQ

Maurice Huppé
Executive Vice President

Administration and Control
Gilles Lacoste
Director

Laboratories
Louis Masson
Vice President

Research
Alain Brosseau
Vice President

Technological Development and Marketing
Toby Gilsig
Vice President

Technology Planning
Hugues St-Onge
Director

Corporate Audit

Rollande Montsion
General Auditor

Research and Development
Pierre Laurin
Director

Corporate Planning

André Delisle
Vice President

Economic and Energy Studies
Jean-Pierre Léveillé
Director

Strategic Planning
Éric Maillé
Director

Corporate Secretariat

Jean Bernier
General Secretary

Indian and Inuit Affairs
Robert Brunette
Vice President

Law
Gilles Legault
General Counsel

Generation, Transmission and Distribution

Jean-Claude Roy
Vice President

Apparatus
André Boily
Director

Dam Safety
Guy Larocque
Director

Distribution
Camille Gaudreault
Director

Operations Planning
Gilbert Neveu
Director

System Operations
Clément Ouellet
Director

Telecommunications
Fernand Roger
Director

Transmission System and Interconnections
Jean-Claude Rodrigue
Director

Human Resources Development

Jacques Nadeau
Vice President

Planning and Development
Vacant
Director

Staffing and Remuneration
Maurice Fortin
Director

Information and Public Affairs

Marcel Couture
Vice President

Internal Communications
Alain Mallette
Director

Publications and Advertising
Roger Boisvert
Director

Public Relations
Daniel N. Granger
Director

Personnel

Michel Blais
Vice President

Health, Safety and Working Conditions
Guy-Paul Hardy
Director

Labor Relations
Vacant
Director

SUBSIDIARIES AND AFFILIATES

(at December 31, 1980)

- Hydro-Québec has six wholly owned subsidiaries: Hydro-Québec International, Nouveler Inc., *Société 2312-0843 Québec Inc.*, *Société d'énergie de la Baie James*, Cedars Rapids Transmission Company Limited, and Somarex Inc.
- In addition, the utility has:

  a 34.2% interest in Churchill Falls (Labrador) Corporation Limited (CFLCo), which operates the Churchill Falls power plant;

  a 50% interest in *HydrogenAL Inc.* and *HydrogenAL II Inc.*, which are general partners in the limited partnerships *société en commandite HydrogenAL* and *société en commandite HydrogenAL II* that produce hydrogen;

  a 50% interest in *ArgonAL Inc.*, which is a general partner in the limited partnership *société en commandite ArgonAL* that mainly produces argon.

HYDRO-QUÉBEC INTERNATIONAL

Chairman of the Board
Maurice Huppé

President and
Chief Executive Officer
Michel Therrien

- Hydro-Québec International provides management, operating and training services in the field of electricity abroad.

NOUVELER INC.

Chairman of the Board
Maurice Huppé

Chief Executive Officer
Claude Bolduc

- Nouveler Inc. markets technological products developed by Hydro-Québec.

SOCIÉTÉ 2312-0843 QUÉBEC INC.

Chairman of the Board
Jean Bernier

- *Société 2312-0843 Québec Inc.* is a special partner in the limited partnerships *HydrogenAL*, *HydrogenAL II* and *ArgonAL*, whose other special partner is Canadian Liquid Air Ltd.

SOCIÉTÉ D'ÉNERGIE DE LA BAIE JAMES

Chairman of the Board
Benoît Michel

President and
Chief Executive Officer
Jean-Guy René

- *Société d'énergie de la Baie James* manages major construction projects for Hydro-Québec's power system.

CEDARS RAPIDS TRANSMISSION COMPANY LIMITED

Chairman of the Board
Pierre Bolduc

Chief Executive Officer
Jean Tremblay

- Cedars Rapids Transmission Company Limited owns and operates a power transmission line between Les Cèdres generating station and the Canada-U.S. border.

SOMAREX INC.

Chairman of the Board
Jacques Guevremont

President and
Chief Executive Officer
Claude Dubé

- Somarex Inc. was created to form, with Central Maine Power Company, a partnership responsible for designing, building, financing and operating a transmission line and substation in Maine. Following cancellation of the contract between Hydro-Québec and Central Maine Power Company in 1989, Somarex ceased its activities.

- ***Energy reserve.*** Runoff in 1989 was markedly below average in the water resources systems of the La Grande, Manicouagan, aux Outardes and Churchill rivers. However, it was average in the water resources systems of the Betsiamites, Saint-Maurice, Ottawa and St. Lawrence rivers. The overall runoff index was 0.83. The low runoff largely explains the decline of energy reserves in the reservoirs from 68.4 billion kilowatthours at January 1, 1989, to 57.3 billion kilowatthours at January 1, 1990, including the energy stored in the reservoirs of the Churchill complex.

- ***Generation.*** Gross generation of Hydro-Québec's power stations was 125.1 billion kilowatthours in 1989, some 3.9 billion kilowatthours less than in 1988. This generation was 94.5% hydroelectric. The three generating stations of the La Grande complex alone supplied 48.9% of the hydroelectric generation. Gentilly 2 and Tracy power stations generated 75.1% and 20.7%, respectively, of the thermal-electric power.

- ***Installed capacity.*** In 1989, installed capacity of the Hydro-Québec system increased 536 megawatts and, at December 31, totaled 25,126 megawatts. Most of the increase came from the commissioning of two of the four generating units at Manic 5 PA power station. In addition, Hydro-Québec has access under contract to most of the generation of the Churchill Falls power plant, which has a nominal capacity of 5,428 megawatts.

- ***Peak demand.*** Peak demand for priority requirements on the system during the winter of 1989-1990 occurred on Thursday, December 14, 1989, at 5 p.m., when demand reached 27,044 megawatts, compared with the previous winter's peak of 26,466 megawatts, an increase of 2.2%.

CANADA
LABRADOR
CHURCHILL FALLS
QUÉBEC
MONTAGNAIS
TILLY
LE MOYNE
MANIC 5 PA
MANIC 5
MICOUA
OUTARDES 4
OUTARDES 3
CHIBOUGAMAU
CHAMOUCHOUANE
JACQUES-CARTIER
LAURENTIDES
LAVIOLETTE
BOUCHERVILLE

Generating Stations in Service	Installed Capacity *(kilowatts)*
Hydroelectric	
La Grande 2	5,328,000
La Grande 4	2,650,500
La Grande 3	2,304,000
Beauharnois	1,645,810
Manic 5	1,292,000
Manic 3	1,183,200
Manic 2	1,015,200
Bersimis 1	930,000
Outardes 3	756,200
Bersimis 2	712,200
Carillon	654,500
Outardes 4	632,000
Manic 5 PA*	532,000
Outardes 2	453,900
Trenche	297,000
Paugan	243,225
Beaumont	243,000
La Tuque	220,000
Rapide Blanc	192,600
Manic 1	184,410
Shawinigan 2	182,600
Shawinigan 3	171,900
Les Cèdres	162,000
Grand-Mère	149,575
Rapides des Îles	146,520
Chelsea	144,000
La Gabelle	136,580
Première Chute	124,200
Rapides Farmers	98,250
Rapides des Quinze	90,000
Chute des Chats	89,300
Bryson	61,000
Rapide 7	57,000
Hart Jaune	48,450
Rivière des Prairies	48,300
Rapide 2	48,000
Chute Hemmings	28,800
Hull 2	27,280
Sept Chutes	18,720
Saint-Narcisse	15,000
Drummondville	14,600
Mitis 1	6,400
Pont-Arnaud	5,450
Chute Bell	4,800
Mitis 2	4,250
Saint-Alban	3,000
Saint-Raphaël	2,550
Chute Garneau	2,240
Corbeau	2,000
Magpie	1,800
Rawdon	1,720
Chute Burroughs	1,600
L'Anse-Saint-Jean	400

	Installed Capacity *(kilowatts)*
Thermal	
Nuclear	
Gentilly 2	685,000
Conventional	
Tracy	600,000
Gas turbines	
La Citière	200,880
Cadillac	162,000

Thermal	
Diesel units	
Îles de la Madeleine	64,514
Blanc-Sablon	9,600
La Tabatière	5,800
La Romaine	3,600
Saint-Augustin	3,000
Kuujjuaq	2,800
Kuujjuarapik	2,400
Salluit	2,110
Natashquan	2,100
Port-Menier	2,000
Povungnituk	1,800
Inukjuak	1,620
Kangirsuk	1,050
Umiujaq	1,050
Ivujivik	975
Kangiqsualujjuaq	900
Quaqtaq	900
Akulivik	850
Île d'Entrée	820
Kangiqsujjuaq	820
Aupaluk	550
Tasiujaq	525

	(kilowatts)
Total installed capacity**	
Hydroelectric generating stations (53)	23,368,030
Thermal plants (26)	1,757,664
Total, 79 plants in operation as of December 31, 1989	25,125,694

Generating Stations Under Construction	Commissioning Date	Installed Capacity *(kilowatts)*
Hydroelectric		
Manic 5 PA*	1990	532,000
La Grande 2A	1991-1992	1,900,000
Brisay	1993	380,000
Laforge 1	1994	820,000
La Grande 1	1994-1995	1,310,000

*As of December 31, 1989, two generating units at Manic 5 PA were in service. When this power station is completed in 1990, its four generating units will have a total installed capacity of 1,064 megawatts.

**Hydro-Québec also has access to most of the generation of the Churchill Falls power plant, which has a nominal capacity of 5,428 megawatts.

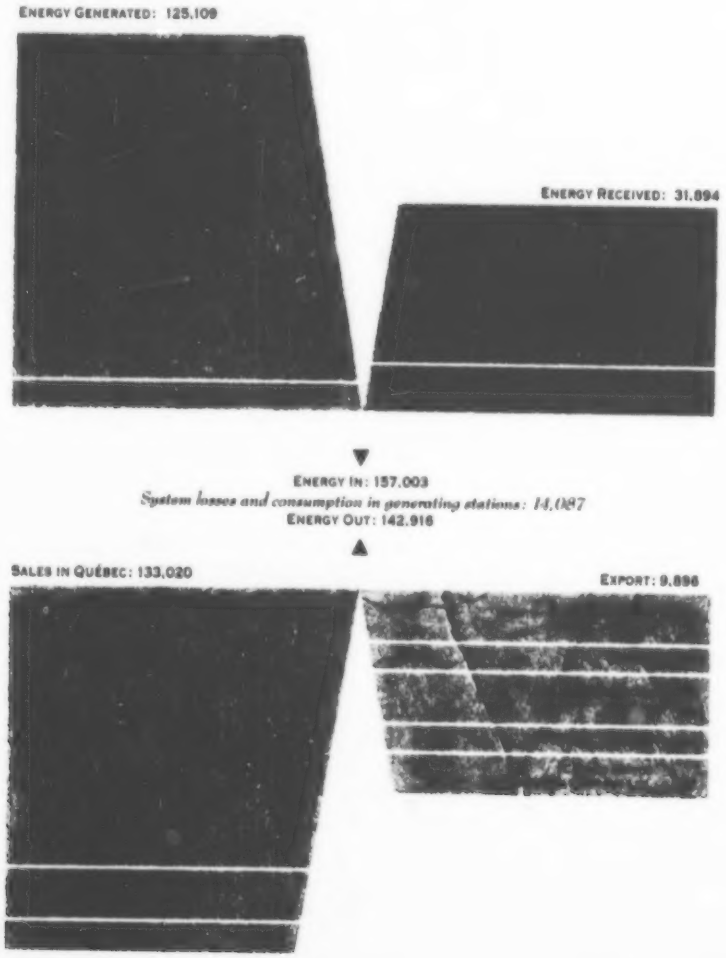
TRANSMISSION AND DISTRIBUTION LINES

(kilometres)	1989	1988	1987	1986	1985
Transmission					
735 and 765 kV	10,008	9,942	10,003	9,900	9,899
450 kV	75	75	78	78	–
315 kV	3,810	3,810	3,805	4,051	3,651
230 kV	3,041	3,045	3,023	3,014	3,005
161 kV	1,521	1,521	1,521	1,513	1,513
120 kV	5,890	5,845	5,810	5,677	5,694
49 and 69 kV	3,687	3,754	3,842	3,836	3,921
	28,032	27,992	28,082	28,069	27,683
Distribution*					
(overhead and underground)					
34 kV	659	655	655	655	655
25 kV	83,168	80,556	75,627	70,916	70,217
4 and 12 kV	10,053	10,714	14,113	17,046	18,318
	93,880	91,925	90,395	88,617	89,190

*These figures reflect the standardization of inventory data in 1988 and 1989.

ENERGY FLOWS (1980)

(millions of kilowatthours)



*INTERCONNECTIONS WITH NEIGHBORING SYSTEMS**

(at December 31, 1980)

*Total simultaneous export capacity is 5,090 megawatts in summer and 5,070 megawatts in winter.

**The interconnection with Ontario can be used to its full capacity of 1,550 megawatts by reducing exports to New York State by 800 megawatts.

***Hydro-Québec has an interconnection capacity for deliveries to New York State of 2,675 megawatts, but receptions by that State are currently limited to 2,495 megawatts.